The Review

A SPECIAL ISSUE

AN ENERGY ANTHOLOGY, 1980

THROUGHOUT 1980, the year in which Imperial Oil Limited marked its centennial, The Review carried a number of articles on aspects of the company's history, from its founding in 1880, to the complex issues it faces in the new era of energy development.

The Review also published pieces on some of the concerns that are uppermost in the minds of modern Canadians: the need for scientific research in our country, the growing effort to conserve our resources and the search for ways to make our industrial life more distinctly Canadian.

We feel such issues are of more than passing relevance. And so we've placed some of those articles in this collection. We hope to foster the purpose we had in mind when we carried them in The Review: to encourage an understanding of the crucial importance of energy in our lives and, as well, perhaps some sense of the contribution Imperial Oil has been privileged to make to Canada for so many years.

FROM 1980

The birth of Imperial

Once upon a time when we were young

BY ROBERT COLLINS

J.R. Minhinnick

F.A. Fitzgerald

T.D. Hodgens

J.L. Englehart

Isaac Waterman

The front-page advertisements and miniscule news stories of the London, Ont., *Free Press* and rival *Daily Advertiser* were rich in dubious achievement that night. England had scored 420 runs against Australia in cricket. Mrs. Wilson's Mystic Pills, "a medicine on which married ladies can depend," were selling for $1 a package. The U.S. consul in Hong Kong had, inexplicably, attacked a U.S. sailor with a spear. And at Port Hope, Ont., a traveling salesman had eloped with a 16-year-old girl of good family, having enticed her, the *Free Press* said darkly, with

"promises of marriage he does not intend to fulfill."

Yet *nowhere,* not even in the financial columns, was there a word about the real news: that 16 leading London businessmen had, that September 8, 1880, incorporated The Imperial Oil Company. Not so much as a line about its whopping capitalization, $500,000, or its sweeping mandate, broader than that of any oil company before it.

Maybe, in hindsight, those editors can be forgiven. How could they have guessed that history was blooming under their noses? The Canadian oil business was sick. Its main product, lamp oil, smelled like skunk and refiners could scarcely give it away. Sweeter American oil was winning the market. Canadian firms by the dozen were going broke. No one — not even the sober-eyed founders in their high collars and sensible suits — could have dreamed that this new oil company would live and flourish for a hundred years.

The idea of *anything* lasting that long was beyond most Canadians' comprehension in 1880. Life was simple; life was chancy. People died young of smallpox, scarlet fever, consumption — ills that primitive medicine could not cure. Business, industry, and everyday life plodded along at, literally, a horse-and-buggy pace. Coal-oil lamps, wood or coal stoves, outdoor privies, and 60-hour workweeks were the rule. Edison was still perfecting his electric light. Bell's four-year-old telephone was a luxury. Automobiles and airplanes were unknown.

Canada itself, only 13 years old, was clinging to nationhood by its fingernails. Its 4.3-million people, spread thinly along the southeastern perimeter, dared not forget that certain militant Yankees yearned to annex this tempting wilderness to the north.

And wilderness it *was,* in the sprawling leagues called the Northwest Territories, between Manitoba and the Pacific Coast. Until far beyond the waving grass, the vanishing buffalo, the pitiless mountains, lay British Columbia, a distant patch of Empire, waiting restlessly for the promised railway that might bind Canada together. All in all, an unpromising time to launch a company.

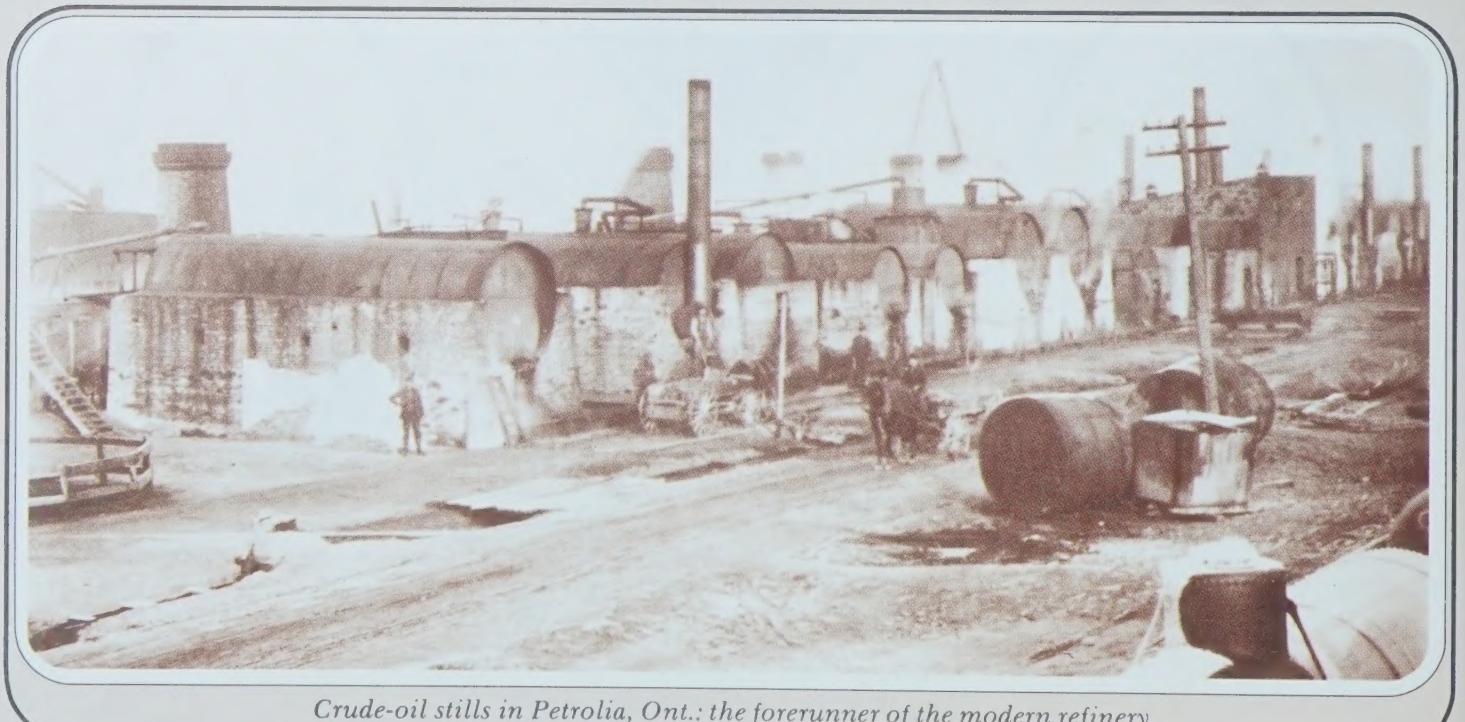
And yet, what better time? It was do or die for the oil business. Oil production had started with such high hopes only 23 years before, when James Miller Williams dug North America's first shallow well in southwestern Ontario. Soon the fields were dotted with wooden tripods — the primitive derricks to handle cable tools that punched out oil wells, before the drilling bit was invented. Place names such as Black Creek, Oil Springs, and Petrolia sang of new prosperity. Crude oil bubbled wastefully over the land. Refineries, rickety firetraps with cast-iron stills, boiled and broke the crude into its basic parts or "fractions," if the refinery didn't burn down first.

In the beginning refiners threw away most of the residue. The only useful product was kerosene or "coal oil." It gave a better light than tallow candles or whale oil and was safer than "burning oil," a treacherously flammable mix of alcohol and camphene, which housewives had been using at their peril. But Ontario's kerosene left a thick crust on lamp wicks and black soot on lamp chimneys, ceilings, and silverware. Its sulphurous odor was so vile that people dubbed it "skunk oil."

When the American Civil War ended, Pennsylvania's low-sulphur oil cut heavily into foreign and Canadian markets. Ontario oil slumped from $7 a barrel to as low as 10 cents. There seemed only one way to beat the Yankees: with a big well-financed oil company run by men with guts and experience.

Imperial's 16 bewhiskered founders admirably filled the bill. They touched every business, political, religious, and ethnic corner of the community. They were Jews and Gentiles; Germans, Irish, and Scots; farmers, merchants, and lawyers. Several had worked together before. For all, the common denominator was a knowledge of oil and prior success in other businesses. London was their logical headquarters — a growing city of planked streets, small industry, and a fluctuating refinery population (52 at one time) that cast a permanent stench over the east end.

For president the founders chose



Crude-oil stills in Petrolia, Ont.: the forerunner of the modern refinery

Frederick Fitzgerald, 40, son of Irish immigrants. His guileless eyes peered out over a voluminous beard. "A man of unbending honor and uncorruptible honesty," glowed a contemporary historian. Fitzgerald had prospered in groceries, lumber, and liquor, helped build London's waterworks, and started a refinery. His partner, Joseph Fallows, was also an Imperial founder.

William Spencer, at 63, was the oldest among them, a pioneer oilman whose roots went back to James Miller Williams. Spencer brought in his sons, Charles and William Melville, the latter as Imperial's first secretary. John Minhinnick was the plumber who'd made good: rising to be president of a foundry, twice president of the London Board of Trade, and a refinery owner along with fellow-founder William English. Handsome John Geary was a Minhinnick partner, too, although a lawyer by profession and a farmer by birth and preference. His country home on 386 acres of land was a local showplace.

Irish-born Thomas Hodgens built carriages; brother Edward built barrels. Thomas loved race horses and politics as much as oil: one day he would own a Queen's Plate winner and also be mayor of London. Lt.-Col. John Walker, a Scot with a military glare that could incinerate raw recruits, had helped chase the Fenians out of Canada. Then he went on to Parliament, built an oil refinery, and was vice-president of the new-born CPR. His refinery partner, the aristocratic-looking Thomas Smallman, had founded Canada's first sulphuric-acid plant. Now he too helped launch Imperial.

Clothier Herman Waterman and brother Isaac, whose civic credits ranged from East London reeve to board of trade president, were also such able refiners that their product won a prize at a Paris exposition. William Cooper, probably the most skilled oilman among the 16, was immediately put in charge of an Imperial refinery.

The mover and shaker of them all was Jacob Englehart, first vice-president. Born in Cleveland, Englehart got into the oil business at 19. He worked with the Waterman brothers, then went on his own. In 1869 his London refinery exploded twice in seven weeks, costing him $8,000, but Englehart, a prodigious worker, rebounded and rebuilt. Once he sold $30,000 worth of kerosene to Germany and was told to refine it over again (probably because of the stink). Englehart, thinking fast, shipped refining equipment to Germany. It was cheaper than bringing the kerosene back.

He bought land and oil wells, and built a fine new refinery at Petrolia. Now, at 33, this dapper little entrepreneur — immaculate in dark suits, glossy shoes, starched collar, flower in his buttonhole, and neatly trimmed Vandyke beard — was on his way to being a millionaire. The 16 founders — plus Geary's brother and two influential out-of-town oilmen — took about 3,000 of the company's authorized 5,000 shares. Significantly, Englehart, with 577 shares, bought the most. The Waterman brothers came second with 450.

The shareholders controlled a dozen refineries. Imperial promptly shut down all but two — Englehart's Silver Star Works in Petrolia and the Victor Oil Works in London — and made them efficient. Three months before incorporation the new company was doing business. Soon the Toronto *Globe* reported Imperial's refiners were "having it pretty much their own way. They have advanced prices from 13.5¢ a barrel to 16.5¢..." By July the *Globe* worried that "the concentration of refining interest ... would ultimately result in the refiners dictating terms."

In fact, that was the only way to restore order from chaos. Imperial's charter allowed unprecedented scope: to buy refineries and oil land, sink oil wells, make products, store them, move them by pipeline, and "all such other things" necessary to make a go of it. It was Canada's first integrated oil company, and the founders ran a no-nonsense operation. The books were opened to shareholders at least once a week, perhaps because the founders, being oilmen, felt entitled to keep tabs on one another. But no share transfers were permitted without the directors'

In the 1880s the petroleum industry in Canada was a horse-and-buggy affair

consent in the first three years.

Almost immediately this firm approach paid off. In late September the London *Advertiser* said, "The market for crude has been booming . . . $1.95 a barrel . . . traceable to the action of The Imperial Oil Company." By year-end Imperial showed a $116,000 profit and paid a $19 dividend. The next year dividends were $18 a share; in 1882, $28. Thus Englehart, for one, earned a tidy $37,000 on his investment in two-and-a-half years, which later helped him build an immense red brick mansion in Petrolia.

But Jake earned every penny. He mothered the refineries, morning to night, six days a week, when he wasn't flitting around the country on company business. He set up safety rules and arranged a compensation fund for men injured on the job. Once an errant workman raced through a refinery danger zone. Englehart fired him on the spot, then rehired him two weeks later and made up the lost wages from his own pocket. The peripatetic vice-president also managed to woo a local farmer's daughter, but didn't find time to marry until 1891.

By 1881 Imperial had a sales agent in Montreal, but the better American oil was still crowding the eastern markets. Clearly, the new company had two priorities: find new markets and take the "skunk" out of its crude. In 1879 Edward Hodgens had invented a deodorizing process, using caustic soda and lead monoxide. It didn't remove sulphur but modified the smell; so Imperial adopted it in 1881.

By then all eyes were turning west, where the CPR was a-building, at last, where settlers soon would flock, where men needed lamp oil, axle grease, and locomotive oils, and cared not a whit about foul smells. This would be the West's decade, and Imperial's founders quickly spotted the trend.

Charles Spencer visited Manitoba and spoke "glowingly of its prospects." Brother William Melville trekked to Vancouver via San Francisco, sold two carloads of Imperial oil — sight unseen and odor unsmelled — and brought home the money in his belt. In 1881 Imperial sent H.E. Sharpe to Winnipeg as sales representative, with territory from the Lakehead to the Pacific. In two years business was good enough to rate a helper.

Young S.B. Blackhall, upon reporting for the job, discovered the Winnipeg office was a single upstairs room with a rolltop desk for the boss, a high desk and Cratchit-like stool for the helper, a sofa, box stove, half-cord of wood, and one pair of hip boots. The boots were essential gear when the delivery wagon sank to its hubcaps in the quagmire streets, two or three times a week.

Poles of ash powered by two men on a teeter-totter punched out the first wells.

Later, Blackhall recorded his daily routine: "Office boy calls at post office for mail, reaching office at 8 a.m. Fills wood stove with wood, throws on half-cup of Silver Star oil, strikes match and 'she's off.' Office boy sweeps floor and dusts desk. Chief clerk opens mail and distributes it to shipping clerk, stock clerk, credit manager, customs broker. Then at 6 p.m. the cashier balances the cash and locks the safe. The entire office staff already mentioned then puts on his hat, and one car ticket carries the 'staff' home on the horse cars."

Soon the railway helped move products west, but long after the last spike was driven in 1885, Imperial oils creaked into all the smaller settlements aboard Red River carts, in five-gallon cans packed in sawdust or in oak barrels. Imperial tried to coax the precious barrels back with a $1.25 refund, but homesteaders clung to them for rain barrels, washtubs or, with the upper front cut out and a seat nailed in, for armchairs.

More than any other oil company, Imperial helped open the West. It served Hudson's Bay posts in the Far North, British Columbia mines and lumber camps, troops marching west to quell the Riel rebellion, new towns sprouting along the CPR. By 1890 its supply depots reached from Fort William to Vancouver.

Back home in Ontario the company was still trying to outmaneuvre its Yankee competition. It sold German-made centre-draft kerosene lamps that burned brighter and cleaner. It paid $10,000 plus company stock to get more fractions from its crude, with a distillation process invented by a German-American, Herman Frasch. When lightning sent the London refinery up in flames, Imperial didn't bother to rebuild. It moved to Petrolia on top of the oil fields, turned Jake Englehart's refinery into the country's finest, and saved money on transportation. A year later head office moved there, too.

Then, in what seemed like a coup, William Melville Spencer produced Herman Frasch in the flesh. Fresh from his Philadelphia laboratory, the short, stocky inventor hired on with

Receiving crude oil in Petrolia: the great grandfather of the tank truck

Imperial in 1884 to develop new oils. They paid him $208.33 a month (as much as President Fitzgerald earned) and made him a director. But the Frasch episode turned out to be a kind of charitable donation from Imperial to the North American oil industry.

Frasch, at 33, was deemed a genius and played the role to the hilt. He revelled in theatre, practical jokes, and gourmet meals. He loved to talk, his sharp gray eyes twinkling, his Vandyke beard wagging. He worked 14 hours a day and sometimes all night, treating lesser men to his hair-trigger temper. An associate called him "a most uncomfortable critter to work with."

He stayed on staff only 10 months. Then, in partnership with young Spencer, who was no longer Imperial's secretary, he manufactured Canada's first wax paper (which Frasch invented) and high quality oils. On the side, Frasch tinkered with skunky crude. One night, in 1885, he made a startling discovery: by adding large amounts of copper oxide to the crude during distillation, he removed the sulphur *and* the smell, in a copper sulphide.

Frasch needed a refinery to practice his theory. With John Minhinnick he formed the Empire Oil Company (several Imperial directors had private refineries on the side and nobody seemed to mind). They produced oil 30 times cleaner than anything else in Canada, inexpensively, and it sold as fast as they could make it. Soon Frasch frolicked back to the United States with his patent and grew rich. But Imperial — although two of its directors had helped in the historic discovery — did not obtain rights to the process until 1899.

Otherwise, the company was holding its own. With an assist from Ottawa, which placed a new tariff on imported oil, Imperial challenged the competition in eastern Canada. In 1886 it opened a sales branch in Saint John, N.B.; in 1887 another in Ottawa. All the time, the founders were eyeing jealously the profits earned by eastern jobbers and wholesalers. Western Canada had few such middlemen. In the East, Imperial needed them, dared not alienate them, but yearned for some of the profit. So, in 1888, it formed the Royal Oil Company with headquarters in Toronto, selling directly to retailers. Royal's oil came from Imperial and the United States, and "Royalite" products did a landslide business. The secret was kept from the public and the rest of the industry, who might have taken a dim view of it. But hidden subsidiaries were legal and already common in the United States.

The industry was growing up. Refiners were now looking for ways to save refinery "waste" products. New ways of extracting paraffin from crude resulted in better lubricants *and* new products. At Petrolia, Imperial pumped oil from its own wells, made kerosene, lube oils, axle grease, wax, and candles and shipped them in barrels made from its own woodlots or in cans made on the premises.

"Many older methods were laid aside and the most modern adopted," wrote the new company secretary. "The skilled workmen have years of experience and have been interested in the improvements." In short, the company was cohesive and its people cared.

But overall the Canadian industry was suffering. An 1890 Royal Commission explained why: American producers turned 75 percent of their crude oil into kerosene; the Canadians, only 40 percent. American wells flowed at an average of 2,000 to 3,000 barrels a day; Canadian wells, about half that. Canadian kerosene, although better, still kept its bad image. American sales captured a third of the Canadian market.

Even Imperial was struggling amidst success. In 10 years the founders had achieved a near-miracle: laid the foundations of a truly national company, kept up with scientific changes, and snatched profit from potential ruin. But to produce and sell in large volumes, thus matching American competition, they needed bigger plants, refineries, and distribution facilities. This meant heavy financing. Where would the money come from? Then, as later, it was hard to coax Canadians to invest in Canada.

Already, American money had entered eastern Canada. In 1888 Standard Oil of New York put $32,500 into the new Eastern Oil Company in New Brunswick; in 1890 Standard took over a Sarnia refinery, through the new Bushnell Oil Company.

That same year Standard reported a "friendly discussion" with Imperial Oil. Nothing came of it then, but it was profoundly significant. The need for new funding and the name Standard Oil would be the story of Imperial's *next* 10 years. □

LEDUC

The story of never-say-die

BY PAUL GRESCOE

Looking back, you might think that Leduc was merely a series of fortuitous accidents. And, if Imperial had guessed wrong at any of several steps along the way, Canada might have remained oil poor and energy dependent for years. You *might* think that: some of the calls that led to Leduc were close enough to curl an oilman's hair. Yet a history of Leduc that dealt only with the happenstance of the country's most significant oil discovery would ignore the optimism and devotion and sheer courage of scores of Imperial employees.

Still, a lot of potential land mines did lie along the road to Leduc. By 1946 Imperial had drilled 133 consecutive dry holes across the Prairies and had almost run out of geological ideas and the inclination to spend more money on exploration. So in January, 1946, a concerned board of directors met to consider petroleum possibilities in western Canada. They decided that with the dwindling crude reserves in Alberta's Turner Valley — the only substantial field on the Prairies — and with no other prospects in sight, Imperial should get into the gas-synthesis business. Cut the company's enormous losses in oil exploration, the board members recommended, and instead manufacture gasoline from the encouraging natural-gas supplies in the Viking Kinsella area 130 kilometres southeast of Edmonton. About the same time the board was considering a company study which, if implemented, would have resulted in a profoundly different Canadian oil industry. The study concluded that Sarnia had no future as a refining area. Instead, the company would have to depend on offshore crude oil supplies and, as a result, refining capacity in Montreal would have to be greatly expanded.

You could hardly blame the board members. In half a century and about $200 million worth of exploration, the Canadian oil industry had drilled perhaps a thousand wells in the West and found reserves of only about 40 million barrels. Since Imperial started exploring there in 1912, the company had spent $23 million looking for oil. It had conducted half the industry's geological studies on the Prairies, a third of the seismograph work, and a quarter of the drilling. And for its efforts it had one field in the far, uneconomic reaches of Norman Wells, N.W.T., and a share of the shrinking Turner Valley production (down to 6.4 million barrels a year from its 1942 high of 10 million barrels).

Oh, there had been some disappointments. In


#1 February 13, 1947.

Saskatchewan (where Imperial's geologists, looking for oil, found the province's first potash deposits), the company had recognized a promising formation in the Midale area in 1941, but pulled out when the provincial government talked of expropriation. It also defined an oil-bearing structure around the Weyburn-Steelman-Workman field, but couldn't test it because the Saskatchewan government refused the company's application for an oil lease in the region. In the next decade, after Leduc, both Midale and Steelman would come in as sizable oil discoveries.

In April, 1946, a group of technical people attended a momentous meeting.

The experts were Bill Roliff, senior geologist for eastern Canada; geologist and engineer Don Mackenzie, a veteran of Turner Valley who was then working in the Toronto headquarters; Oliver Hopkins, a company director responsible for exploration; Fred McKinnon, a senior geologist in the West; Lorne Falconer, a geologist with the Canol project, the joint American-Canadian oil-pipeline project between Norman Wells and Whitehorse; Gus Beck, a geophysicist then in management; and Dr. Ted Link.

Link was a brilliant and aggressive geologist who had explored the Arctic and in 1920 found the Norman Wells field for Imperial; two years later in Alberta he discovered some of the world's largest natural-gas wells. Now he was Imperial's chief geologist, and the doomsayers among the company's management considered him a raving optimist. "He was talking to marketing and refining people at that time," recalls Doug Layer, a Calgary geologist who worked under Link, "and they were not inclined to take risks. So he had to work pretty hard."

In 1944 Link had suggested drilling tests be made of a belt of central Alberta that began northwest of Edmonton and continued south of the city, through Leduc, and beyond.

Two years later, at the meeting, the technical men recommended that this area be explored for both gas and oil. "This is considered the most important portion of the most promising or prospective area in Canada for immediate attention," they said in a report. "It is the opinion of the group that no efforts should be spared to explore vigorously, by all means available in this area ..."

Their bold recommendation to management was bolstered the following month by the results of a questionnaire that Ted Link had circulated to Imperial's 32 geologists. Among other questions, it asked: "Do you sincerely believe that more commercial oil can be discovered in Canada?" They did. If so, Link asked his men in the field, where in the West did they believe the oil was most likely to be found? Of a dozen areas, 18 of the geologists gave their first choice and six their second choice as the same central Alberta plains.

In Toronto, Imperial's directors were convinced. There would be one final flurry of petroleum testing before the company admitted defeat and built a gas-synthesis plant. It was a courageous decision for the time. Few other companies were continuing to spend much money on western oil exploration, and one of the majors had pulled all of its testing rigs out of Alberta, because of the province's depressing prospects.

One of the directors was Bill Twaits, later president and chairman of the board, who said afterwards: "I recall there was a major argument in the Imperial board, ending in a reluctant agreement to proceed with the test rather than immediately developing a final design on a gas-synthesis plant for Viking Kinsella. The word was 'after $23 million, this is final.'"

In Calgary, Imperial's western-base exploration manager Jack Webb and geophysical manager Ray Walters oversaw the selection of land to be tested. Among the land the company reserved — from the province, Canadian Pacific Railway, Hudson's Bay Company, and private landowners — was Leduc No. 351, whose 65,950 original hectares did *not* include the township of Leduc.

For seismic testing, the area was divided into east-west lines, about 10 kilometres apart. The first line to be tested ran along a gravel road just within the northern tip of the township, although that land wasn't yet within the company's reservation. The seismic party picked the line because it was conveniently located on one of the few roads in the area, and — with the spring thaw — the road was about to be closed to heavy traffic.

After a portable drilling rig sank 18-metre holes along the line, the seismic crew detonated dynamite underground. The shock waves traveled until they reached solid rock, then bounced upward to geophones that were placed at regular intervals along the ground. The waves' recorded time intervals described a profile of the rock formations below.

After geophysicist Carl Chapman mapped the subsurface formations, the Calgary office noticed an irregularity on the line along the township road. The anomaly was an unexpected rise in the rock which, just possibly, might have some oil trapped behind it. But it was only what geologists call a "one-point high," a very slight irregularity that was often found in Cretaceous rock — nothing too significant.

Still, head geophysicist Ray Walters thought that if Imperial was going to drill anywhere in the Leduc area, it might as well be at that anomaly. The company added the Leduc township area to its reservation of land.

The conventional wisdom among Imperial geologists was that oil in central Alberta would most likely be found in the Cretaceous rock zone. Around Leduc the lower Cretaceous would run to a depth of approximately 1,400 metres. Chief geologist Link had a theory that an oil basin could be properly evaluated only by testing it to the much-deeper Precambrian level. Calgary geologist W.P. Hancock, compromising, recommended that the Leduc test be drilled to the Silurian level, 600 metres below the Cretaceous.

The company brought in a drilling crew from Provost, Alta., with a toolpush (supervisor) named Vern Hunter. The boisterous son of a Baptist minister, he'd been a roughneck, working on derrick floors at Turner Valley and

on the Canol project. For most of the three previous years he'd been running crews in Saskatchewan where he picked up the nicknames "Saltwater" and "Dry Hole" Hunter for all his wells that turned to water or dust. He remembers drilling in the wild cattle country of Buffalo Gap, near the Montana border, and thinking that the land would certainly have oil. It didn't. He was pessimistic when he moved to Leduc, 29 kilometres south of Edmonton: "They'll never find oil here. It's too close to the city."

Leduc in November, 1946, was a stagnant town of 982, obviously suffering from its proximity to Edmonton. It had a decrepit town hall, an antique fire engine with buggy wheels, an outdoor curling rink, and a hotel called the Waldorf. Its citizens weren't thrilled by the arrival of four drillers and 28 roughnecks, who always traveled with a reputation for rambunctiousness. Nor were they excited on November 20, when Vern Hunter and his men spudded in Leduc No. 1 near the barnyard of grain farmer Mike Turta, 17 kilometres from Leduc.

Nobody in the field felt overconfident, either. As geologist Doug Layer, one of the well-site geologists, says now: "In the mid-forties there wasn't any great optimism. Very few geologists working were making much money. Most of us were in it because we loved geology. We were hoping that the companies would find enough money so we could keep doing what we wanted to do." As for the company managers, "they didn't think Leduc would be any different. It was going to be just another dry hole."

Hunter recalls that Layer told him the company's plan was to test-drill No. 1, then keep moving west until — if nothing else — the formations were defined. "From the beginning," said George McClintock, who was another geologist at the site, "our orders were to feel our way along as carefully as amorous porcupines."

But almost from the start they worked with a feeling they hadn't often experienced before: hope. Leduc No. 1 seemed different. The crew began seeing encouraging signs that this was (in the words of George McClintock) "no ordinary posthole."

As Vern Hunter tells it: "We were doing an awful lot of coring and testing. All the way down from the first 2,000 feet [610 metres] or so, we started to pick up a little gas and signs of oil in the Cretaceous. The whole thing was alive. And when we got down to the D2 [into a layer of Devonian rock], well, that's when the whole thing started for western Canada."

Early in the new year, late one chilly afternoon, geologist Steve Cosburn was at the site when drilling reached the 1,532-metre level. Looking at samples of dolomite limestone from the well, he noticed that they had a clear yellowish liquid in their pores. Fresh oil. He drove into Leduc to have the limestone tested. The results suggested a healthy reservoir of gas and oil.

The drilling crew then did drill-stem tests — further sampling of the rock's contents — and on February 3, at a depth of 1,541 metres, a geyser shot from the drill pipe and showered roughneck Al (Frenchy) Desnoyers with dirty mud and delightful light crude oil.

Within the company the word went out. Walker Taylor, the western producing manager, radioed the news to drilling superintendent Charlie Visser and operations manager Vern Taylor, who were at a well northwest of Hinton, Alta. Taylor, who retired as a senior vice-president and director of Imperial, recalls the excitement: "We hightailed it back. It was the most encouragement we'd had outside Turner Valley. None of the southern wells had performed as nicely as this one."

By then the news had leaked outside the company. On February 5, Calgary and Edmonton newspapers carried rumors of "a strike of major importance." Lease hounds — buyers and sellers of mineral rights — began to converge on the area, bargaining for any leases still available. The pot was boiling. Imperial's public-relations department convinced management to take an audacious step: to name a specific date and invite the press and public to view the wildcat well actually come into production.

Management's plan shook toolpush Vern Hunter, whose job it was to supervise drilling operations in the field: "The two Taylor boys, Walker and Vern [not brothers], asked me to name the day — which I did under protest. So many things can happen when you're fooling with temperamental oil wells. But I named February 13, and started praying."

Hunter's plan was to have a crew ready at daylight on the 13th to begin swabbing, a method that acts like a plunger on a pump: the swab is dropped down the production tube several dozen metres at a time, then as it's lifted the water comes up behind. When the first swabbing went well, Hunter hurried home for breakfast, only to rush back when an old engine working the swab broke down. The swab was stuck in the hole at the end of 300 metres of line.

Mild panic. The company had daringly predicted that the well should come in by 1 p.m. Now Imperial staff had to delay their invited guests — reporters, politicians, businessmen — with a briefing at an Edmonton hotel. But hundreds of curious people had begun streaming to the snowy site early that morning to see the 41-metre drilling derrick.

"Are these people bothering you?" Walker Taylor asked Hunter.

"Yeah," he replied, "they keep asking me when it's going to blow."

About 500 onlookers were gathered at the site, some of them huddling in a boiler room, others munching on sandwiches, pickles, and cake the company had hurriedly ordered from the Cottage Tea Room in Edmonton.

By about 2 p.m. Hunter and his crew had removed the old swab line from the hole and installed a new one. But as they resumed swabbing, some of the crowd was leaving.

At 3:55 p.m. the fourth swab was lifted from the 900-metre level. Behind it a 15-metre gusher of oil and gas erupted. The crew turned the flow to a sump pit and, 10 minutes later, to a flare line. A roughneck, Johnny Funk, ignited an oil-drenched sack at the end of a rope, swung it

like a lariat over his head, and tossed it, lighting the flare line. Flames immediately soared 15 metres. Inky smoke climbed many metres higher. As Hunter described the scene: "The world's most beautiful smoke ring went floating skywards."

The flare died as uncleared water cut it off, but pressure rose about 5 p.m. and the well was alive once more. At 6:10 the flow was switched to the separator and Nathan Tanner, Alberta's lands and mines minister, turned a valve to move the oil into storage tanks.

Edmonton radio station CJCA was at the site, recording the noise of the oil as it ran into the sump pit. "That swooshing sound you just heard," the announcer said, "was the Imperial Oil Limited's No. 1 well at Leduc, Alberta, coming into production. The oil started flowing under its own pressure at 4 o'clock this afternoon, Thursday, February 13, in what may be a momentous occasion in the oil world.

"Hundreds of people have been waiting here most of the day for this event to happen, and they were certainly not disappointed. Suddenly, as they drew the swab up out of the 5,000-foot [1,524-metre] hole, there was a burst of sound and a great gush of oil and water climbed almost halfway up the derrick ...

"I'm going to ask Mr. Walker Taylor, the western manager of the production department of Imperial Oil Limited, who is at my side at the moment, to give you a few comments now that this well is in production. Mr. Taylor, would you care to comment on the well's possibilities and the possible size of the field now that this new baby has been born?"

"It is much too early in the life of the well to make any statement of its productive ability," Taylor replied in a measured tone that made him sound as if he were reading from a prepared statement. "But from the way it is now acting, it would appear to have definite possibilities. Several holes will have to be drilled in an attempt to establish the limits of the productive area. Our company is most optimistic regarding possibilities of the area and, if this well stands up under tests, we will possibly have several more rigs operating shortly."

"Thank you very much, Mr. Taylor. We might tell you, ladies and gentlemen, that in the past 10 years Imperial Oil Limited has drilled 114 holes in western Canada ... This is the best-looking prospect so far. The well, to date, has cost approximately $90,000 and is now in production."

Everyone posed for photographs, with Vern Hunter in galoshes, windbreaker, and a fedora with the brim snapped down. That evening Imperial threw a party in Edmonton; the weary Hunter was invited, but went to bed instead. Later that night a man in a Model T raced up to the derrick, jumped out of his car, and breathlessly asked the remaining crew what time the well had exploded.

There were others on hand that February 13, who knew exactly what was happening. Carl Nickle, who chronicled the fledgling industry in his *Daily Oil Bulletin*, was among the crowd that watched No. 1 roar in. As he wrote the next day in his mimeographed newsletter: "In the small hours of this morning I shivered in a raw wind while my hand on the flow pipe recorded the steady pulsating of oil heading for the storage tanks and gas heading for the flare ... This writer is more impressed by Leduc's performance than by any other Western Canadian Oil Discovery in the past decade ... Fruits of the Imperial efforts have been small to date. Leduc may be the beginning of a different story for Imperial, and a brightened future for the industry, which benefits from the discoveries of all."

What even such seasoned observers as Nickle didn't know was that courage and luck had played more than their usual roles in Leduc No. 1. If the technical experts meeting in Toronto hadn't decided to explore the Edmonton area, if the majority of company geologists hadn't agreed on the prospects of Alberta's central plains, if the board of directors hadn't allowed one final study of oil possibilities before committing themselves to gas synthesis, then Imperial would never have come to Leduc.

And if the first east-west line the seismic party tested had been a kilometre south, the crew wouldn't have found the "one-point high" that prompted drilling. If a geophysicist hadn't suggested drilling that fairly insignificant anomaly, the company might have ignored the Leduc area entirely. And if the technical experts hadn't recommended going far below the usual Cretaceous level, No. 1 would have been only a noncommercial gas well ...

Luck played as large a part in Leduc No. 2, the well that indicated to Imperial just how enormous a reservoir of oil lay in the deep Devonian rock. At its site, 2.4 kilometres southwest of the original well, No. 2 — spudded in the day before No. 1 came in — hit nothing at first but gas and water. While Toronto management was actively considering the possibility of pulling the rig off the site, the Calgary office told the drillers to keep working. And at 1,637 metres they struck a reef of oil that would become the Leduc field.

The Edmonton Bulletin of May 16, 1947, reported on its front page: "A surging, angry voice from the depths of the earth Thursday at 1:30 p.m. announced to the world that the Leduc area may become one of the most prolific producers of petroleum crude in the West ..."

It was an accurate prophecy. Leduc was all the encouragement the Canadian oil industry needed. By year's end there were 28 producing wells in the field; in early 1948 Imperial was announcing a $20-million plan to expand exploration and development in Alberta that would employ 1,500 workers in Edmonton alone. That year the roughnecks left their skid shacks that had been parked on the Leduc sports grounds and moved to the new town of Devon, which Imperial had built nearby.

Other companies joined Imperial's search for oil, with exploration crews scattering across the Prairies by plane, canoe, and trailer trains: entire seismographic camps that were hauled by trucks across the snowy wilds of northern Alberta. And they found much more crude in the Prairie provinces, in fields like Pembina and Redwater. For years Canada would be self-sufficient in oil. □

Imperial Oil field geologists at Rock Lake, Alta., taking rock samples, one of the first stages in the search for oil

BARRY DURSLEY

TEN TOUGH YEARS

And now, the new frontier

BY WYNNE THOMAS

The events that were destined to hold the whole of the western world in economic thrall throughout most of the 1970s and to reshape dramatically the Canadian oil industry had their genesis more than half a century earlier.

In 1927 Standard Oil of New Jersey (now Exxon) turned down a share in a potential oil discovery in Bahrain in the Persian Gulf on the grounds that the deposits would probably be too small to be worth the risk and expense of developing. The company was soon to realize its mistake. When, some years later, surveys indicated the possibility of the existence of oil beneath the sands of Saudi Arabia, Standard Oil began exploring.

Initial results were unpromising: the company drilled six wells and came up with six dry holes. But a seventh well came in at 7,000 barrels of high-quality crude oil and was shortly followed by the discovery of immense pools in Saudi Arabia and adjacent countries.

Within a few years oil, costing no more than 15 cents a barrel to produce, was literally cheaper than water in the Middle East. The American, British, and Dutch oil companies that produced, refined, and marketed Middle East oil, sharing the profits with the country of origin, were able to sell it on world markets at prices ranging between $1.30 and $2 a barrel. For nearly half a century the Middle East would provide as much oil as the world wanted to buy.

The effects of an unlimited supply of cheap oil were wide-ranging and profound. In the United States, nourished on a diet of cheap gasoline and encouraged by a massive program of road building, the automobile evolved into a lumbering species of its own, shunning economy for comfort and performance and providing a degree of mobility that allowed people to live as far as they wished from where they worked. ("Nobody wants a small car," Henry Ford Sr. had told a *Wall Street Journal* reporter in 1937. "If they did I would build it.")

In Canada low-priced petroleum imports were severely hampering the efforts of a still fledgling domestic oil industry to develop the recently discovered reserves of the West. To encourage such development, in 1961 the federal government adopted a policy recommended by the publicly appointed Borden Commission, whereby

all of the Canadian market west of a north-south line running near Ottawa was reserved for domestic production. In the 1970s the memory of a government that was prepared to sanction higher than world prices to develop domestic oil supplies would come to have an ironic ring.

But in the Canada of 1970, emerging from what in retrospect would come to be viewed wistfully as a halcyon decade of prosperity, there were few signs of the economic upheaval to come. Nor was energy the subject of much government attention or public concern. That year oil and gas did not warrant even a passing mention in the Throne speech in the Alberta legislature, which occupied itself with such subjects as exerting tighter control on education spending and enacting a new social development program.

Such attention as energy did attract was focused on the threat posed to Canada's national oil policy by the leakage of low-cost foreign gasoline into the Ontario market and the uncertainty that was beginning to cloud the future of Canadian oil exports to the United States, then approaching a million barrels a day. (The U.S. government was threatening to use access to the American market for Canadian oil as a bargaining weapon in negotiations for a continental energy policy, a threat implemented the following year when the Nixon administration temporarily restricted the amount of Canadian oil that could be imported into the American market east of the Rocky Mountains.)

But, for those who could read them, the first signs of the gathering storm were already there. Even before the formation of the Organization for Petroleum Exporting Countries in 1960, the dependence of many western nations on Middle Eastern oil troubled some observers. In Imperial Oil's annual report for 1970, chairman and chief executive officer W.O. Twaits drew attention to OPEC's determination to increase its oil revenues and that policy's implications for Canada.

Two years later Twaits returned to much the same theme. He pointed out that Canadian energy reserves, substantial though they were, "cannot guarantee that Canada will not face interruptions in energy supply — or assure Canada the most economic development of supply. These reserves must be developed in a systematic way. Exploration success cannot be scheduled . . . ."

Significantly, many of Twaits' comments in that 1972 report dealt with the hydrocarbon promise of the North. It had become increasingly apparent to Imperial's planners that the potential of conventional oil in the western provinces, although encouraging, was unlikely to prove sufficient to meet all of Canada's future oil and gas requirements.

As early as the mid-1960s the company had embarked on a program of Arctic exploration, and by the end of the decade it was substantially involved in initial projects aimed at realizing the energy potential of the Alberta oil sands. Both these areas of endeavor would continue to make heavy financial demands on Imperial throughout the 1970s: by the end of the decade Imperial had invested considerably more than a billion dollars on northern exploration and oil-sands developments.

Oil had become a potent political weapon

By the early 1970s the wisdom of initiating such long-range projects was already becoming clear; no significant oil discovery had been made in western Canada since 1965, and production was already falling from established fields in Manitoba, Saskatchewan, and British Columbia. But even industry experts were to be surprised by the speed at which oil production in the West was to decline during the middle and later years of the decade. By the late 1970s difficult and costly techniques were required on a large scale to stimulate the flow of oil from mature and ebbing western wells.

If confirmation were needed of the prudence of Canada's embarking on an all-out effort to increase its supplies of indigenous energy, it was provided by the actions of OPEC in 1973-74.

At the beginning of 1973 the price of OPEC oil stood at around $3 a barrel. Within the space of scarcely more than a year the price had quadrupled, and, with an embargo on the shipment of Iraqi crude to the United States in reprisal for U.S. support of Israel in the Yom Kippur war, oil had become a potent political weapon. (Not since 1773, when the American colonists were threatened with the loss of tea if they didn't pay taxes to the British crown, had that country been deprived of a commodity it wanted.)

The OPEC moves signaled not only a fundamental change in the world's energy picture but a radical shift in the global balance of economic power. Inflation rates in western countries rose sharply, many oil-importing nations found themselves facing severe balance-of-payments problems, and OPEC's recycling of petro-dollars did little to expand the productive base of the world's economy.

For the Canadian oil industry, one of the more profound effects of OPEC's action was to be a radical change in the national pricing structure for oil and gas. "The importance of OPEC from the Canadian standpoint," Jack Armstrong, Imperial's chairman and chief executive officer, recalled recently, "was that it resulted in the commodity values of oil and natural gas coming closer to reflecting costs of production and the real value of this country's energy assets." Oil started 1973, in the words of *The Montreal Gazette*, as a "slumbering giant." The federal government's Throne speech at the beginning of that year made only a passing reference to energy, noting that western Canada wanted industrial development to reinforce its "great resource and energy base." In January 1973 the average wellhead price of a barrel of Alberta crude, as determined by market forces, stood at $3.

By August the price had risen to $3.80. On September 4 Prime Minister Trudeau announced that a "control mechanism" would be devised to keep Canadian oil prices from rising in step with world prices, and 10 days later Energy Minister Donald Macdonald announced a tax on export of crude oil to the United States. Effectively, the announcements signaled the end of the previous arrangement, whereby U.S. prices determined the price of Canadian oil and natural gas, and served notice that future prices would be set by the government of Canada. These moves were immediately construed by the oil-producing provinces as a threat to their constitutional right to control resource development.

Thus were fired the opening shots

in a bitter and prolonged federal-provincial battle which, with occasional truces, was to continue throughout the remainder of the decade and remain tragically unresolved by the decade's end. It is a dispute that, as many observers have noted, has more to do with constitutional wrangling than with energy-pricing policies.

"Federalism is central to the current discussion of energy policy in Canada," Donald Stevenson of Ontario's ministry of intergovernmental affairs wrote recently. "Energy policy has sparked a debate about the conduct of federal-provincial relations. The concentration of resources, primarily oil and gas, in one region of the country coupled with provincial ownership and jurisdiction over the management of natural resources means that energy has been less of a debate between public and private sectors of the economy than between different governments and different regions of the country."

Nevertheless, the entry of the federal government into the energy field, which before 1960 had been largely regarded as a matter of regional interest, was to have a major influence on the shape of the Canadian petroleum industry during the 1970s. Ottawa was to emerge as an active participant in a number of energy projects. In 1975 it became a minority partner in the Syncrude oil-sands project. That investment was to presage a more extensive federal government role in the petroleum sector through the creation, later the same year, of a national petroleum corporation, Petro-Canada.

Clearly government influence on oil and gas development on the scale that became apparent in the mid-1970s was destined to have a profound effect on the manner in which the industry, including Imperial, was able to apply itself to its primary task of finding and producing more energy. In particular, the amount of revenues that was allowed to flow through to the industry by the federal and provincial governments had a crucial effect on the rate of development, a factor that became obvious in 1975 when exploration, hobbled by a lack of funds, slowed to a snail's pace.

BARRY DURSLEY

Cold Lake: construction is ready to begin on another major innovative project

Nevertheless, Imperial continued to pursue its energy development policies at a precedent-setting pace. Those policies had essentially been determined the previous decade. "So far as new energy sources were concerned," explains Peter Stauft, vice-president of natural resources coordination, "the company had reached two major conclusions during the 1960s:

"The first was that the new resources of the Arctic and offshore would eventually have to come to the rescue of our declining known reserves of conventional oil in western Canada. The second was that investment in such heavy-oil projects as Syncrude and Cold Lake could not only pay handsome dividends in terms of new energy supplies for Canada but represented opportunities for diversification at a good rate of return. We were convinced even then that there would come a day when such heavy-oil projects would prove economic."

As it turned out, Imperial's search for conventional oil and gas in the newer areas had, by the end of the decade, resulted in a to-be-expected mixture of success, failure, and frustration. Hopes of capitalizing on a major gas discovery in the Mackenzie Delta by the early 1980s were dashed when the federal government turned down proposals for a Mackenzie Valley pipeline, although the gas itself remains an appreciating asset.

The discovery of commercial deposits of conventional oil in the Arctic eluded Imperial explorers for most of the decade, but a significant find in the Beaufort Sea earlier this year raised many hopes. Offshore exploration, still in its early stages, had yet to yield results, although a promising discovery by another operator suggested potential for the offshore Atlantic. Elsewhere successes were more tangible. In western Canada, where Imperial considerably increased its land holdings toward the end of the decade, oil and gas continued to be discovered in significant amounts, and at Norman Wells in the Northwest Territories — the company's oldest producing oil field — the existence of additional reserves was confirmed and techniques developed for their economic production.

By the end of the decade Imperial's long-held faith in the oil sands had been vindicated. The Syncrude project (in which the company is the major shareholder) was launched, after many problems, in 1974 and was completed in 1978. By the end of 1979 the project was clearly a winner, producing badly needed supplies of synthetic crude at a consistent and encouraging rate and, finally, a long-awaited return for its owners. As former energy minister Macdonald commented recently in a

private paper, "the ugly duckling of December 1974 had become the winsome maiden of 1979." And, at decade's end, construction was poised to begin on another major innovative project, Imperial's Cold Lake oilsands plant.

Profound though the changes were that the company faced in its crude-oil and natural-gas operations throughout the 1970s, they were far from constituting its only challenge. Protection of the environment, for example, was to become a pressing concern, partly in response to public pressure but also in accord with a growing corporate- and industry-wide awareness of the need for extreme care in resource development in ecologically sensitive areas such as the Arctic. Imperial was to spend many millions of dollars in developing techniques to ensure that energy projects, no matter how urgent, were pursued with minimum hazard to the habitat.

In a real sense, such concerns were to add an extra dimension to the company's operations. New disciplines were recruited and professional biologists and ecologists joined geologists and geophysicists in the development of projects. Imperial had never proceeded with a conscious disregard for the environment. But for the first time, environmental protection was to become an integral and essential part of hydrocarbon development.

In the field of petroleum retailing Imperial, in common with its competitors throughout the industry, had to come to terms with a growing consumerism and the realities of a changing marketplace. It was a difficult but, in retrospect, beneficial adjustment.

The oil companies have been accused, somewhat questionably, of needless indulgence in gimmickry to sell their products during the carefree years of the 1960s. In truth, gasoline retailing was a child of its time. The sixties were an era of giveaways. Gasoline was cheap, service stations plentiful, and competition intense. There were road maps for the asking, promotions galore, and an Esso tiger in a gratifying number of tanks.

The sobering seventies were to change all that. As gasoline prices rose, so did consumer disenchantment with marketing frills. Consumers began to turn in increasing numbers to so-called private branders — independent retailers who, with low overheads and few facilities, were able to provide stiff price competition.

"We were beginning to find ourselves noncompetitive," says Charles Hayles, Imperial's assistant general manager of marketing. "We simply had to look for low-cost ways of retailing gasoline. In 1971 we began experimenting with self-serve stations and found that they won ready acceptance. We cut our promotions, started shedding marginally economic stations, and looked at other ways of cutting costs. There was not a single aspect of our operations that did not come under the cost microscope."

The result: today Imperial has fewer but more efficient service stations, a happier — and more prosperous — network of dealers, and, inflation notwithstanding, has actually reduced the cost of wholesaling gasoline. And the contribution of its marketing operations to the company's profits has reflected those efficiencies.

In retrospect, Imperial's Armstrong looks back on the 1970s as a decade of solid achievement. "It was a period," he says, "when off-shore and Arctic developments justified the positions we had taken earlier in our energy search. The 1970s also saw Imperial reach some important milestones in non-petroleum areas. The company made significant contributions in such other energy areas as coal and uranium, and we became a commanding presence in chemicals and firmly established in minerals development."

In short, the Imperial Oil of 1980 is a markedly different company from the Imperial Oil of 1970. It has been a busy decade and one that has irrevocably changed not only the organizational structure but, in some ways, the basic identity of the company.

For Imperial 1980 is a year of especial significance. It marks the end of not only a decade but a century of operations. As it has been reminding the public in this year's advertising campaign, it has been part of Canada's future for 100 years. That's not a bad record. And with the energy challenges facing Canada today, Imperial would like to think that it's going to be needed for quite a while longer. It's certainly planning to be. "If Canada grasps its tremendous resource opportunities," says Jack Armstrong, "the next decade can see Canada embark on the biggest energy capital-investment program of any country in the world. And this need be but a stepping stone to the immense projects that will await beyond the 1980s." □


BLACK STAR

Drilling rigs in Iran: OPEC initiated a radical shift in global economic power

THE CANADIAN WAY

BY GORDON DONALDSON

Jack Shaw, a 36-year-old metallurgist, has a new job. He's called the conscience of Cold Lake, the ombudsman and, less reverently, the guy who goes around looking for maple leaves on things. Officially he is Albertan-Canadian content manager of the $7-billion oil-sands project to be built by Esso Resources Canada Limited near Cold Lake, Alta. He'll watch the spending of that $7 billion and help Canadian firms get the biggest possible share of it. It sounds like fun. Even rubbing shoulders with all that money must be a thrill. But why should Cold Lake or any other Imperial project need a Canadian "conscience"? Imperial has been a Canadian corporate citizen for a century and has a long-established purchasing policy that begins: "Give preference to Canadian manufacturers, provided they offer similar quality, delivery, service, and price, and encourage the manufacture in Canada of materials required in our operations." It's a policy that's gone beyond just being a good corporate citizen; it has created a positive atmosphere for the development of Canadian manufacturing.

Of the nearly $500 million Imperial is currently spending on materials (exclusive of crude oil), nearly 90 percent is spent in Canada. But that doesn't mean the purchases are 100 percent Canadian in *content*. They may have been manufactured from imported raw materials, assembled from imported parts, or designed and engineered elsewhere. How Canadian, for example, is a Canadian-made car? And how Canadian is a length of steel made in Canada from iron ore mined in Canada in a smelter fired by American coal? Dissecting every piece of "Canadian" equipment and tracing its ancestry would be extremely difficult and expensive, but as Canadian content regulations continue to expand and multiply, people like Jack Shaw will be trying to develop systems to track as many Canadian goods and services into various projects as possible.

In addition to federal regulations, there are increasing demands by the provinces for regional content. How Albertan, for example, is a Canadian car made in Ontario? Obviously, following a simple buy-Canadian policy is not enough.

The content regulations of the 1970s and 1980s recall the surge of economic nationalism of the 1960s. The nationalists wanted to buy back Canada from the foreign investors who own a very large share of Canadian industry, particularly the oil industry. Their convictions — which seemed to gain ground all through the sixties — were widely discussed in the universities and vigorously supported by some of the country's most influential editorial pages, such as those of Canada's largest newspaper, *The Toronto Star*. Small wonder, therefore, that when the pollsters sampled the opinion of the public in the sixties and seventies, they detected, in varying degrees, clear support for the nationalist view. However, a majority of Canadians wanted to retain the benefits of foreign investment. In 1973 a University of Windsor group asked respondents if they would accept a lower standard of living in order to gain more control over their economy. Forty-four percent said yes; 48 percent, no.

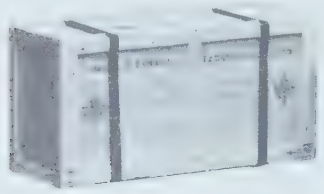
Prime Minister Lester Pearson, a pragmatist, was probably right when he said, in 1966, that "nationalistic economic policies would reduce the Canadian standard of living by 25 percent to 30 percent," adding that "not many Canadians are willing to do that, and I don't think Canadians should have to do that."

By the mid-1970s there was less talk about "buying back" Canada. The watchword was "Canadian content."

PETER PATTERSON


MADE IN CANADA
FABRIQUÉ AU CANADA

Attempts were made to stem the flood of American popular culture across the border by setting Canadian content standards in radio and television programming. It worked in radio. By requiring stations to play a relatively high proportion of records made in Canada, the government created a booming Canadian recording industry, and the listeners didn't complain. It hasn't worked too well in television, since much of the Canadian content looks like watered-down American content. In magazines the principal result was the elimination of the Canadian edition of *Time*, thereby reducing Canadian content, but Canadians still buy and advertise in the U.S. edition sold in Canada. The ghost of *Time* Canada fattens and prospers.



On the industrial side Canadian content rules demanded that Canadians have more control of their own destiny — an idea that dates back to the last century, when secondary industry was first established in this country. But more recently this desire for control was accompanied by an upsurge in regionalism — separatist success in Quebec, western alienation, grumbling in the Maritimes, and shocked feelings of isolation in Ontario.

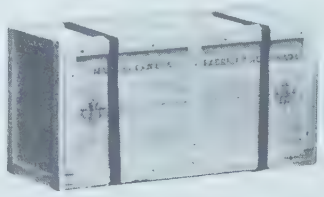
Canadian content became Canadian-Canadian content plus regional-Canadian content. Statutes and guidelines were discussed more and more. So were policies and broad hints of policies yet to come. It was no longer enough for a Canadian company, especially one involved in resource development, to be a good Canadian citizen. It had to be a good regional, provincial, and local citizen as well.

There are two basic kinds of requirements discussed in resource development: one, that Canadian firms, individuals, or governments own, control, or manage a project to a prescribed extent; two, that firms obtain goods and services from Canadian sources.

These can be enforced in various ways. For instance, Canadian mining regulations stipulate that federal mining leases will not be granted to any company incorporated outside Canada or to any corporation that isn't at least 50 percent owned by Canadian citizens or that is not listed on a recognized Canadian stock exchange. A government can also demand a piece of the action as Newfoundland does under the Newfoundland and Labrador Petroleum Regulations (1977), which require companies to transfer a 40-percent interest in their projects to the province's petroleum board.

There are various definitions of a Canadian corporation. British Columbia, for instance, restricts mineral exploration and production to a Canadian resident or a corporation where at least 50 percent of its directors are Canadian residents. Alberta prohibits the sale of land to foreign-controlled companies or nonresidents but exempts pipeline and refinery lands as well as lands acquired for processing, manufacturing, and marketing plants. There are several other exemptions, and it's all very complicated and getting more so.

Regulations covering materials and services are based on the fear that companies, if left to their own devices, will bring in foreign materials from suppliers that their head offices know and trust, as well as bringing in their own experts, middle management, and key workers. There is little fear that they'd import unskilled or semi-skilled labor since, apart from immigration problems, companies will always hire local people, if available, because they make for a stable work force. The federal and many provincial governments want priority to be given to local labor. Newfoundland, for instance, insists that oil companies provide training programs to increase workers' skills and, all across the North, companies are encouraged to hire native people where practicable.



In rules governing procurement, regionalism is increasing. The Saskatchewan government, for example, encourages northern Saskatchewan projects to give first priority to northern Saskatchewan suppliers, second to Saskatchewan suppliers, and third to Canadian ones. Its general policy on nonrenewable resource projects is that Saskatchewan firms get priority, other western firms come next, and the rest of Canada follows.

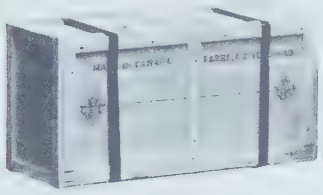
What do these often conflicting regional demands do for Canada as a whole? Dr. Donald Eldon, a senior Imperial adviser on government relations who has studied content policies across Canada, says: "On a nationwide basis, one province's content requirements may reduce the social product and the welfare of the nation as a whole, in part because the policy may lead to retaliation by other provinces and to a whole set of internal 'tariffs' limiting movement of capital, labor, and goods and services between provinces." Eldon foresees further increases in content legislation — new laws not even in proposal form at the moment — accompanied by formal and informal pressure to hire more Canadian and regional contractors.

Because of these new, or potential, complex and conflicting pressures, Esso Resources has set Jack Shaw and others like him to work on the subtle refinements of procurement policy. There is no change in policy; the company has always believed it is in its own best interests to develop Canadian and regional pools of supply and talent. It's just that the task becomes more complicated day by day.

Shaw is important, because Cold Lake is extremely important. It's the biggest Imperial project ever: a complex that will eventually contain 8,000 steam-assisted oil wells and produce 22,400 cubic metres of upgraded crude per day for 25 years — about 10 percent of the total Canadian oil production of the period. It is due to go into operation in 1986. About 10,000 workers will be required to build it, 2,000 to operate it, and it is expected to create about 7,000 permanent jobs in Alberta. The process — using injected steam to soften bitumen 400 to 500 metres down — is new Canadian technology. It's a challenge to Canadians, North Americans, the whole world.

Senior Project Director Ralph Routledge, a Montrealer and a McGill engineering graduate, sees his priorities very clearly when developing a contracting plan for the Cold Lake project: first and foremost he must have a successful project; second, a large involvement of Canadian firms in the project and, finally, the development of Canadian capability to execute something on this scale. He feels all three objectives are attainable. Routledge wants to hire Canadian engineers to do an increased amount

of detailed work on the project. "The amount they will handle," he says, "will depend largely on their availability at the time of the award." According to present plans, of a total of eight million engineering man-hours for the Cold Lake project, Esso Resources expects about 6.5 million to be done in Canada.

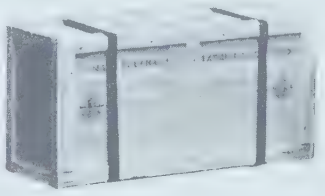


However, to reach "priority one" a firm with worldwide experience in megaprojects in the process industries was needed, and there aren't any in Canada. So Fluor Canada Ltd. (a subsidiary of Fluor Engineers and Constructors based in Irvine, Cal.) has been hired as lead contractor — what Routledge calls "the quarterback" — to work with four Canadian-owned companies, Cana Construction Co. Ltd., Delta Projects Limited, Lavalin Services Inc., and SNC/FW Ltd., in a joint venture to build the Cold Lake project under the supervision of Esso Resources Canada. Fluor's experts span the globe. Their engineers are now working on an upgrading project in Venezuela and on a $20-billion gas development in Saudi Arabia. By working with Fluor, the Canadian members of the joint venture should gain valuable additional expertise. Although Routledge will use Canadian engineers for detailed work on the project, he's concerned that there may not be enough of them available. There are about 3,500 engineers in Canada of the type required for the project, and if Shell's Alsands plant goes through at the same time as Cold Lake, both projects may have to look outside for engineers.

Materials, too. Bill Penhale, Cold Lake project manager for procurement, is concerned about Canadian steel supply if Foothills (Yukon), Cold Lake, and Alsands begin at the same time. Canadian content is a good objective, but the cold fact is that you have to have the material when you need it. The other thing that concerns Penhale is the conflict between short-term Canadian content and long-term industrial benefit to Canada. There would be little long-term benefit to Alberta, he says, if we encouraged a Canadian manufacturer to markedly increase his capacity for small valves, or something that's easy to make, and put up a plant. But at the end of the project the plant might have to close down, and the skills that had been acquired would be wasted.

"I would like the report at the end of this project to say that we have assisted, say, a few suppliers to develop facilities in Canada — with perhaps two or three in Alberta and some in other areas of Canada," Penhale says. "We helped establish them by diligently working through our specifications with them, and we bought from them because they were competitive in price *and they're still in business*."

Some of the big items needed at Cold Lake may not be available in Canada. In theory they could be built here, but not quickly enough. Many of the thick-walled pressure vessels — approximately 50 of them with walls in excess of seven centimetres and some weighing up to 325 tonnes each — simply won't be available in Canada when required by the project. The two 38,000 horsepower air blowers for the FLEXICOKING plant are another example of equipment that may come from outside Canada. Since they are crucial to a project's success, oil-well pumps usually come from the United States, even though there are some Canadian manufacturers, because the U.S. suppliers have been in business longer and their products have been proven reliable. However, Russ Powell, a tall, lean engineer with more than 20 years' experience in oil production, says, "We want to use new Canadian companies whenever possible. We're using Canadian pumps at Cold Lake, for instance, and we're currently running tests to evaluate the equipment of other Canadian companies. The problem is that it takes five years or more to prove the durability of a pumping unit."



Oilmen on the ground, with the oily Alberta mud on their boots, tend to be blunt. A spade is a spade and a drill is a drill and it doesn't matter who makes it as long as it does the job. They don't have to be concerned, as Bill Penhale does, with new accounting systems that will track the Alberta and Canadian content of materials used. "In terms of reporting and analysis," Penhale says, "this policy can become very, very complicated."

Jack Shaw begins at the beginning. Cold Lake's $7 billion haven't been spent yet; the requirements have not been set; and the suppliers haven't bid. Seminars are planned after the project is approved by the provincial government (first in western, then in eastern Canada), telling potential suppliers about the project requirements. "We've given potential suppliers and the Alberta and Canadian governments our best estimates of what we will need. If we waited until we had an exact list, people would not be able to react quickly enough." However, when foreign suppliers phone, the Albertan-Canadian content manager doesn't hang up on them, for who knows .... "If we can't get all the Canadian materials we want at the time," Shaw says, "we may need them."

Canadian content is an ideal and a worthy one. But no company has yet agreed to pay a premium for it — pay more for goods or services that it could get cheaper elsewhere — and no government has yet demanded it do so.

"At some point," says Douglas MacAllan, Imperial's vice-president for corporate affairs, "every company may be faced by the question: *Even if there are costs,* will we give preference to Canadian suppliers and engineers, because if we don't, the project won't be allowed to go ahead?" And he adds, "If the world was functioning in terms of free trade you could go to your lowest-cost supplier. But we don't live in that kind of world. There are other policy objectives that are perfectly legitimate."

To Douglas MacAllan, Canadian content is not an end in itself. "Its purpose," he says, "is to achieve some other objective: the development of a secondary industry, the creation of more jobs or a higher level of skills, or the creation of a capacity to go out into the world market and compete and earn foreign revenues.

"It's a device to achieve growth, but sometimes it could have adverse economic effects. Does it create uneconomic industry that cannot be sustained? Does it reduce competition in the country and thereby put prices up? It can be a two-edged sword. While there can be many benefits from it there can also be possible dangers, and that's the balance the public policy maker and the person affected by it are always trying to strike." □

Oil is where you

And that means just about everywhere

BY PATRICIA CLARKE

Art Bain, Imperial's coordinator of energy studies, reinsulated his Toronto house and turned down the thermostat. He cut his heating bill by 40 percent.

Martin McKay of Barrie, Ont., tuned up his car and took lessons on how to save gas while driving. He saved a tank of gas a week on his daily commuting to Toronto.

A Woolco store in Quebec dimmed its lighting level. It saved $1,000 on electricity the first month.

Bata redesigned its Picton, Ont., shoe factory and eliminated about 90 percent of its energy needs.

Bain and McKay and the store manager and the factory superintendent and thousands like them across Canada are saving themselves money. But they're doing something more than that. They are making an important contribution to Canada's energy supply. For the cheapest and fastest way to get a new barrel of oil or cubic foot of natural gas these days is not to use the old one.

"In principle," as Dr. David Brooks, former director of the federal office of energy conservation (OEC), has said, "energy conservation is just as important as energy production."

The federal department of energy, mines, and resources (EMR) has estimated that squeezing more energy from every ounce of fuel could cut the growth in the total amount of energy we use from 3.5 percent in 1978 to two percent per year. But that reduction, notes EMR, will require the cooperation of governments, industry, and individuals.

Saving energy is more than a matter of principle; it's common sense. By conservation we can stretch the irreplaceable petroleum we have now, reduce our dependence on expensive and uncertain foreign imports, cut down pollution, and buy time to bring new petroleum or alternate energy sources into production. And we can do all that, says OEC, with today's technology, at economic cost, and without going back to the wood stove and the horse and buggy.

There are signs that we are making some progress already. Our current average rate of energy consumption is growing by half what it was in the late 1960s. The result of that slowdown is best seen in oil. If we had kept on using oil at the same rate of increase as we did prior to 1973, the demand today would be for more than 2.5 million barrels a day. Instead, it has leveled off at less than two million barrels a day.

Not all that change is the result of conservation. Part of it is because of slower economic growth, and part because of switches to other kinds of energy. But Art Bain estimates that conservation has cut the oil demand by seven percent. That's 150,000 barrels a day we don't have to buy from outside Canada. Such savings are impressive. But conservation by itself cannot solve all our problems. Though it's in our interest to stretch out the supply as long as we can, there is an irreducible minimum of petroleum we need until new technologies are developed. Estimates vary on how great a supply of conventional oil is left in western Canada, but the rate of production is slowing down. New supplies from the frontiers and other sources, such as Imperial's heavy-oil plant at Cold Lake, Alta., won't be available until the mid- to late 1980s and then will do little more than make up the loss of conventional oil. If we are to reduce our dependence on imported

save it

oil — which could take as much as $10 billion a year out of Canada by 1985, if it is available at any price — we need major new sources of supply. And Imperial is spending about $700 million this year on the development of energy-related projects.

All the energy we can find will continue to be needed. "And," as Art Bain stresses, "we don't need to be embarrassed about using it, if we're using it efficiently."

The point is that we're not. For years energy prices in Canada have been so low that there has been no incentive to do so. Indeed, some estimate that half what we consume is wasted. But we haven't worried about that. In the postwar growth years of the 1950s and 1960s, energy was cheap and getting cheaper. In the 1960s, for example, industrial energy prices fell by 30 percent relative to wages. We began using five or six percent more of it each year. As a result, we now consume twice as much per capita as we did in 1960, though our lives have not greatly changed since then. It didn't make economic sense in those years to invest in energy-efficient equipment or even to consider energy consumption in design. And we were confident our natural resources were unlimited: isn't that what we had been taught in school since Grade 3 geography?

That energy binge couldn't last. It collapsed abruptly with the oil crisis of 1973. The suddenly higher prices made us aware of what we should have noticed before — that while between 1890 and 1960 the world has consumed the equivalent of a cubic mile of petroleum, it now was getting dangerously close to using one cubic mile a *year,* and we in Canada were using more of it per capita than anyone else in the world. Although prices were still historically low (in terms of the amount of labor it takes to buy a barrel of oil), it was obvious energy costs were going to take a bigger share of our income in the future, unless we cut down our consumption.

Since then, the federal government has set up conservation programs that during a 15-year period will cost almost $2 billion. All the provincial governments have energy saving programs, too. And there definitely are impressive savings to be made.

In Nova Scotia, for example, a provincial government energy audit identified potential savings of 13 percent in the yearly energy bills of 550

ERIC NASMITH

industrial, commercial, and institutional users — in some cases up to 70 percent. In Ontario, government in-house measures cut energy use in half at one Toronto office building. Correctional institutions have cut their energy costs by 25 percent in two years, and some hospitals have pared a third from their bills.

Canada's industries, which normally use about 36 percent of our energy, report equally worthwhile savings. Most of our factories were built when energy was cheaper than the cost of energy-efficient equipment. As a result, in some cases we have been using twice the energy per unit of output as comparable factories abroad; and when energy costs soared our competitiveness nosedived.

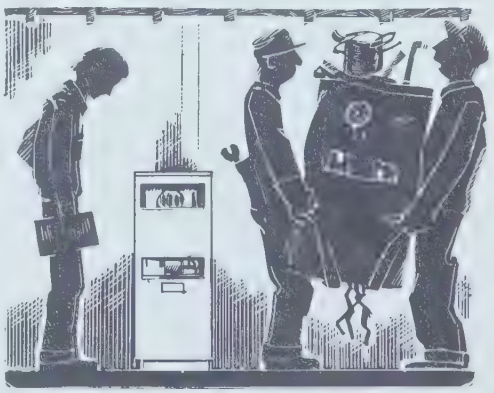
In response to a challenge from the federal government, Canadian industries have committed themselves to reduce their energy consumption per unit of production by 12 percent by the end of 1980. By the end of 1978, companies in eight major industrial groups, involved in the government's energy conservation program, reported energy savings of 10.7 percent. That's the equivalent of 83,000 barrels a day of crude oil — at current import prices, about $3 million a day.

It's worth it to take a closer look at how three different industries managed this. By the end of 1978, the chemical industry, where energy has always been a substantial part of operating costs, was using energy 17 percent more efficiently than at the base rate in 1972. That means enough energy saved in a year to heat all the homes in Metropolitan Toronto.

At Union Carbide, where 25 to 30 cents of every sales dollar goes to buy energy and energy-related feedstocks, "management recognizes that energy is no longer a commodity to waste," says Carl Wolf, who is the company's manager of energy affairs and also chairs the coordinating committee for the federal government's conservation task force. Union Carbide is now using energy 26.5 percent more efficiently than in 1972, well above its industry average, and as a result is saving the equivalent of $22 million a year. "How many sales would you have to get," Wolf asks, "to generate a $22 million income?"

The first step at Union Carbide as elsewhere is housekeeping, what Wolf calls "cleaning up the shop." Checking leaks, tuning up furnaces — that can save as much as 10 percent. The second step is, in its space-age terminology, a retrofit. That means installing more energy-efficient equipment. The third is developing new energy-efficient techniques or processes. That's the most expensive, but it has the most long-run impact.

Inco in Sudbury, Ont., has a similar pragmatic approach to energy efficiency. "It's bucks," says John MacDougall, an assistant vice-president. Inco, which got into energy management and energy audits in



1972 as a good business measure, targeted a 10-percent cut in consumption between 1973 and 1980. It reached almost 11 percent, compared to an average of 3.6 for the industry at the end of 1978. Actual savings for the four years between 1975 and 1979 (not including the strike period) were $13 million, at little if any capital cost, says Gerry Cullain, a utilities manager. "Basically," he adds, "it's increased efficiency."

Inco is looking for an additional 15 percent saving by 1985, but that will involve capital expenditures for heat recovery. Such installations have long been standard in Europe and Japan. "They have had much higher energy costs for years," he points out. "There was no economic return to such types of installations in Canada. Now we are in a new era. We have to recover as much waste heat as possible if we are to be cost-competitive."

One of the heaviest users of petroleum in Canada is the petroleum industry itself. It takes seven percent of every 100 barrels of crude oil to turn out usable products. Bill Keough, who is in charge of refining operations in Imperial's logistics department, estimates that three barrels of that could be saved. That alone would have the effect of increasing Canada's oil supply by three percent.

Imperial is doing the standard things such as turning the office lights out and the thermostats down and replacing its sales and service cars with more fuel-efficient models. But the big savings, not only in fuel but in money, come in refinery operations, for energy is about 40 percent of the operating costs of refineries and Imperial uses the equivalent of 11 million barrels of oil a year. The industry task-force target is an 18-percent saving by 1980. By the end of 1978 it had achieved 15 percent. "Imperial's target is more demanding," says Keough.

The first cuts, as elsewhere, are the easy ones. There were "dramatic savings," Keough says, after employees were shown a videotape of each refinery that points out such wastes as steam leaks and inefficient furnaces. The second stage begins to cost money. Flue gas heat exchangers, for instance, are being installed, like the ones European refineries have been using for years but which were uneconomic in Canada when energy was cheap. A third stage involves such sophisticated measures as computer control to improve energy consumption in the refining process. All of these changes will be needed for the petroleum industry to achieve its objective of reducing energy consumption by 25 percent in 1985, Keough says.

All together, he thinks, a total reduction of 35 percent is technically possible. "And with the forecast energy prices," he adds, "it will be reached just as quickly as we can."

Some argue that building and installing new equipment uses energy, too, perhaps as much as it saves. But a study reported in *Science* indicates that the energy required for such equipment is typically 10 percent a year of the direct energy savings.

And the after-tax return on such investment, according to U.S. studies, is 20 to 30 percent.

The second major area where conservation is already having an impact is the home, where we normally use about 20 percent of our energy, almost three-quarters of it for heat.

The possible savings here, in money and precious fuel, are enormous. If every family made its home as energy-efficient as Art Bain's — he insulated the attic and the basement walls, put storms on the basement windows, and turned down the thermostat — we could cut out current consumption by at least a third and save the equivalent of almost 300,000 barrels a day of oil.

Many of us are taking steps to do so. About 25 percent, Imperial's surveys show, are making changes to their homes. And 77 percent, according to a 1977 survey reported by the department of energy, mines, and resources, are turning down the thermostat.

The result is that gas and electric companies, as well as oil dealers, report a significant drop in consumption. Imperial, for instance, found a 15-percent saving. That means, Art Bain explains, that if you used 100 units of fuel to heat your home in 1972, you are heating it now for 85 units. And if you reinsulate it to current standards, you can get by with 55. A federal program provides grants of up to $500 to help you do that, and in late 1979 some 10,000 people a week were cashing in on them.

More efficient furnaces are an important factor in fuel saving, too, for most of the ones now in use were designed when heating oil was 15 cents a gallon. Imperial is marketing new furnaces that reduce heating costs 20 percent, and at that rate they will pay for themselves in under five years. The federal government believes the national saving could be significant: it is conducting a $150,000 test in Prince Edward Island this year of a planned $5 million national oil furnace retrofit program.

What Dr. David Brooks, the former OEC director, calls "the most horrible examples of waste" are found in our commercial and institutional buildings. In this sector, existing buildings could save 25 percent; better design cuts consumption 80 percent or more. A new Ontario Hydro building in Toronto needs a fifth the energy required by a conventional building.

Indeed, a new Gulf Canada Resources office building in Calgary operates with no furnace at all: it utilizes the heat from the sun and given off by the people, the lights, and the machinery.

Simple measures are producing startling savings. The Waterfront Mall in Summerside, P.E.I., cut its electricity bill in half, by $10,000, by turning off unneeded power.

Carleton University saved $600,000 by such measures as removing unneeded lights, shortening the air-conditioning season, reducing the hot-water temperature, and insulating steam lines. The cost was $20,000.

London, Ont., cut the energy use for its city hall by 25 percent by reducing lighting levels and the air system operating hours and resetting temperature and humidity controls. The first year saving, at 1977 prices, was $39,000.

Generally, the Ontario ministry of energy estimates, building operators can save up to 25 percent by such no-cost measures. Upgrading insulation and installing automatic timers pay off in 18 months to three years. Major retrofits and waste-heat recovery have a five- to 10-year payback.

The fourth major energy use sector, transportation, takes a quarter of our energy but almost half of our oil. And the good news is that although our gasoline consumption is still climbing,

our rate of increase is expected to decline. That's because of improvements in cars, which by 1985 should make it possible for a new car to go almost twice as far on a gallon of gas as the average car did in 1972.

By switching to bicycles or buses for short city trips (that's where almost half the gas used in Ontario goes) and by more economical driving habits, we could cut consumption even more. That was demonstrated by an experiment called Operation Tune-up, jointly sponsored by EMR and the Ontario Motor League. After tune-ups of their cars and lessons on gas-saving driving, 12 regular commuters between Toronto and Barrie, Ont., saved an average of 12.9 percent on fuel. The best performer saved a tank a week. But even the average, if all Canadian drivers did the same, would conserve 700 million gallons of gas a year.

In the new atmosphere of conservation, Imperial has discovered that "performance" to most drivers no longer means "power" but now means "efficiency." And so, says Charles Hayles, Imperial's assistant general manager of marketing, the company has put most of its research effort in the past several years into products that cut the cost of operating a car. For instance, an improved formula motor oil introduced in 1978 added 17.6 kilometres to the average tank of gas.

Wait a minute; what kind of a product is that for a company that wants to sell gasoline? It's easy to understand why Imperial would be committed to energy conservation in its own operations. A dollar less on the expense side is a dollar more on the profit side. But energy conservation for its customers? Isn't it in business, like everyone else, to sell as much as it can?

Hayles explains. "The fundamental principle of good marketing is to give the customers what they want, not what you have. If they want energy efficiency, that's what we try to provide." And although products that reduce demand cut the total market, if you are the one supplying what the customer wants they can — and do — increase your share.

There's a bit more to it than that, though. "A company," says Hayles, "has to stand for more than being a money-generator for stockholders. It has to have a purpose that is socially acceptable. To ensure our long-term survival we have to keep in step with the goals of society."

And Tom Hennessey, the heating fuels manager, whose department is helping promote the government's program to cut heating fuel consumption, says flatly, "we support conservation. The cheapest barrel of oil we can buy today is the one we save." □

WASTE NOT

HOW TO SAVE

1. Turn down the thermostat. If it is normally at 22 degrees Celsius, cut back to 20 degrees Celsius during the waking hours and 17 degrees Celsius while you sleep and save 15 percent on your fuel bill. That alone could add 12 million barrels of oil or its equivalent a year to our supply.
2. Insulate. Tom Hennessey, Imperial's heating fuels manager, says bringing your attic insulation to a standard of R 10 to 30 can save 10 percent of your fuel bill, insulating the basement walls another 15 percent. And the federal government's CHIP program will pay up to $500 of the cost.
3. Put on storm windows and don't forget the basement. They can halve the heat loss through the windows.
4. Treat your furnace or boiler to a tune-up every year, and if you have forced-air heating keep the filter clean. Tune-ups can save you $30 to $40 a year.
5. Pull the shades and drapes at night. That could save another eight percent.
6. Turn down the water heater from the usual 60 degrees Celsius to 43 degrees Celsius. The estimated saving: 25 percent.
7. Fix that leaky tap. A drop a second adds up to 50 gallons of hot water wasted a month.
8. Use appliances such as dishwashers and washing machines only with full loads and try to avoid the peak electricity hours. Check the government's energy-efficient ratings when you buy new appliances.
9. Don't let the water run while you wash your hands or shave. Shaving in a basin uses only seven percent of the hot water you use when you shave with running water.
10. You don't have to shower with a friend to save on showers. Get wet, turn off the water while you soap, then rinse; that uses a sixth the hot water of a normal shower. Or buy a water-saver shower head; it releases only a third as much water.
11. Make the energy you use do double duty. Leave the hot water in the tub after a bath to warm the bathroom.
12. As your mother used to tell you, turn out the lights.
13. In the car, observe the speed limit. It can take 22 percent more gas to travel the same distance at 112 kilometres an hour than at 80.
14. Keep your tires fully inflated. The drag from soft tires can cost you an extra six percent in gas.
15. Keep the filters clean. A dirty carburetor air filter can cost you up to 64 gallons a year.
16. Let the engine warm gradually. Don't gun it.
17. Don't let the car idle. A minute of idling uses more gas than restarting the motor.
18. Think twice before you turn on the air conditioning. The power needed can use more than the equivalent of a gallon of gas in every tank-full.
19. Leave jackrabbit starts to jackrabbits. They can increase your gas consumption by six percent.

The federal department of energy, mines, and resources at 580 Booth St., Ottawa K1A 0E4, has compiled some excellent books on energy conservation. (Some are also available from provincial ministries.) Among them are:

- *Keeping the heat in* — how to reinsulate your home.
- *100 ways to save energy and money in the home.*
- *The billpayer's guide to furnace servicing.*
- *Fuel economy.*
- *The garbage book* — how to save energy and money by throwing out less.

RESEARCH

Imperial's long history and more of the same

BY PATRICIA CLARKE

ILLUSTRATIONS: TINA HOLDCROFT

It is eight o'clock on a November evening, and in Calgary the temperature has already dipped below freezing. On Builder's Road a motorist, peering into the frosty night, suddenly spies up ahead a splash of light in the darkness. There, in the glare of beaming spotlights, four men stand around a frozen swimming pool; two others hack at the ice with chain saws. Then, just as the motorist drives past, two of the parka-clad figures step behind cameras and begin to film the wintry scene.

What the puzzled motorist has come upon is not the making of a new Canadian film on northern adventure. But he has caught a glimpse of a Canadian activity that, like the film industry itself, is getting an increasing amount of public attention.

For the driver is passing part of the property of Esso Resources Canada Limited in Calgary, and the men at the poolside are, in fact, scientists doing research on the effect of ice formations on drilling structures.

Ice research is only one example of Imperial's long tradition of research involving Canada's physical environment. It's also a sign that Imperial Oil is interested not just in "incremental" research — studies aimed at improving existing products — but in original research that will advance Canadian knowledge, increase the country's productivity, and help create projects that result in thousands of new jobs.

However, there is a nagging feeling among some Canadians that the country's corporations are lagging when it comes to research and development — popularly referred to as R and D. The president of the Canadian Manufacturers Association speaks of the country's "dismal performance" in innovation and calls R and D "a glaring weak spot." John Roberts, minister of state for science and technology, complains that we lack the competitive technological edge that world markets demand.

Given this viewpoint, which some analysts claim to be a bit imprecise, Canadian industry is being challenged to answer the charge that the nation's firms — in particular the multinational firms — don't do enough research.

There is, of course, a multitude of answers to that charge. The fact is that R and D is a highly complex issue, and making generalizations and searching for scapegoats won't help resolve it.

Nevertheless, there is always room for improvement and, as part of its R and D strategy, the federal government has set a goal of 1.5 percent of the gross national product to be devoted to R and D spending by 1985. When expressed as a percentage of value added (a corporation's equivalent of GNP), Imperial's research works out to about 1.4 percent, very close to the national goal of 1.5 percent for *all* research in Canada, which includes research done by universities, government, *and* industry. Even Bill Stadelman, president of the Ontario Research Foundation, who keeps his finger on industrial research generally, was impressed by the breadth and depth of Imperial's research program when he visited its Sarnia, Ont., laboratories. He mentioned not only its financial commitment — Imperial has the largest petroleum research establishment in Canada — but also the way that commitment has made Imperial a world leader in several key areas of the petroleum industry.

J.G. Livingstone, Imperial's president, isn't going to get into an argument on whether multinational firms do or don't pull their weight in research. Probably some don't. On the other hand, it's easy to blame almost everything except the weather on foreign ownership. What he does know about is Imperial's record, and as one of the people who contributed to it (his name is on a patent connected with a refining process), he thinks it is one the company and the country can be proud of. "Research is an essential part of our business," he says, "both to serve our customers and to make a profit. And we've become worldwide specialists in what we do."

The company has been involved in research for almost 100 years, since it hired a chemist in 1884 to find out how to take the evil-smelling sulfur out of western Ontario crude oil so it could compete with oil from the United States. Last year Imperial spent $33 million on research in Canada. As a percentage of sales that is higher than most international oil companies. As a percentage of value added it is about four times the Canadian industry average.

One of Imperial's three Canadian laboratories is in Montreal. Building Products of Canada Limited, a subsidiary of Esso Chemical, has a

research and engineering group of about 25 working on such products as insulation and vinyl siding that will do a better job of energy conservation.

The laboratory in Sarnia, oldest at 56 years and largest with a staff of 365, does "downstream research" into refining processes and petroleum and chemical products. A part of its effort is going into harnessing new energy sources such as the sun.

A laboratory in Calgary under Esso Resources, an Imperial subsidiary, has a staff of 220 which does "upstream research" — new ways to find petroleum and mineral resources and get them out of the ground.

This research effort is growing. The Sarnia laboratories have added 100 new people in the last two years and have just opened a $3.5-million new wing, with a further $25-million expansion planned. Calgary just opened a new minerals research division, for the company's coal, metals, and uranium interests, and is bulging out of its 6,500-square-metre building.

Peter Stauft, an Imperial vice-president who is the company's natural resources coordinator, says the growth is mostly because of the urgency of making our petroleum supplies stretch as far as they can. On the downstream side, it's devising processes that save manufacturers energy and use less crude oil while turning out products that last longer and save gas. Upstream, it's new ventures to squeeze more oil from conventional wells and to get the most energy at the lowest cost from harder-to-tap sources such as heavy oil or "tight gas" sands.

At Sarnia, where the 75 laboratories sprawl through eight buildings, solar collectors on the roof test which design best captures the sun's energy. On a climate-controlled dynamometer, which measures and controls the work done by engines, researchers monitor fuel economy while automobiles run on the spot at 100 kilometres per hour. Electron microscopes magnify the fibres in greases up to 50,000 times so scientists can develop the most efficient lubricants.

The Sarnia laboratory is the research specialist for the worldwide Exxon family in the processing of lubricating oils, and Exxon pays most of the bill for a research effort that employs 120 persons. "We couldn't

gather a team like this if we had only the Canadian market," Dave Shaw, the lube process division manager, says.

Gathering such a team has paid off. The Sarnia labs have more than 400 patients to their credit. Research manager John Tiedje is involved in 25, including one for a process to improve the flow of furnace fuels, which was developed at minimal cost and has found worldwide application. Sarnia developed a process in 1930 that at one time was used in making almost half the world's lubricating oil. Recently it developed a successor to that process. It took eight years and cost $1 million. But the new process, Exol N, is safer, cleaner, uses 25 percent less energy in the manufacturing process, and squeezes two percent more product out of every barrel of crude.

The Calgary laboratory is 30 years younger than Sarnia, but it also, according to Don Best, a research group leader, "has many world firsts." The manager is Vern Larson, low-key, well organized, who relaxes from balancing budgets during the day by studying gourmet recipes at night and who appears to have injected all his co-workers with his philosophy: "How do you know it won't work if you haven't tried it?"

What the Imperial laboratories do — indeed, what nearly all industrial researchers do — is called mission-oriented research. That's opposed to the pure research into the basic nature of things that properly goes on in universities. "We're in the business of doing things that tie in to the future plans of our company," Larson says. But he adds, "We're also in the business of doing things that are not in the future plans of our company — yet." And so there is one scientist on his staff, George Smith, whose job includes trying to anticipate what, in 1990, the company will wish it had started work on today.

The kind of research varies with the problem. "We get as fundamental as we need to; sometimes that's pretty fundamental," Larson says. Take, for example, the work on ice physics, glimpsed earlier by our puzzled motorist, for which Imperial has received international recognition. The company staked out a promising section of the Beaufort Sea in the 1960s. Then it asked the research people to find out how to drill a well. No one had done offshore drilling in the Arctic before. Almost nothing was known about what to expect from the ice — whether it moved, how much it moved, what force is exerted — or how to build a drilling platform that could stand up to it.

The answers came after years of observation in the Arctic and experiments in one of the largest open-air ice basins in the world, located behind the Calgary laboratories, a pool 55 by 30 metres and one to four metres deep through which sheets of ice were towed to observe and measure their effect on scale models of drilling structures.

"We were the only people trying to solve that problem," Larson says, "and we found out a lot about ice that no one knew." The discoveries, reported at scientific sessions, can help in planning other northern installations.

But research isn't only finding out what no one knows. It is also using what everyone knows for a purpose no one has thought of before. Everyone knew you could drill horizontally for sewer lines or electric cables. But not for oil wells. That wasn't done.

At Esso Resources, however, they don't know what can't be done. So they go ahead and do it.

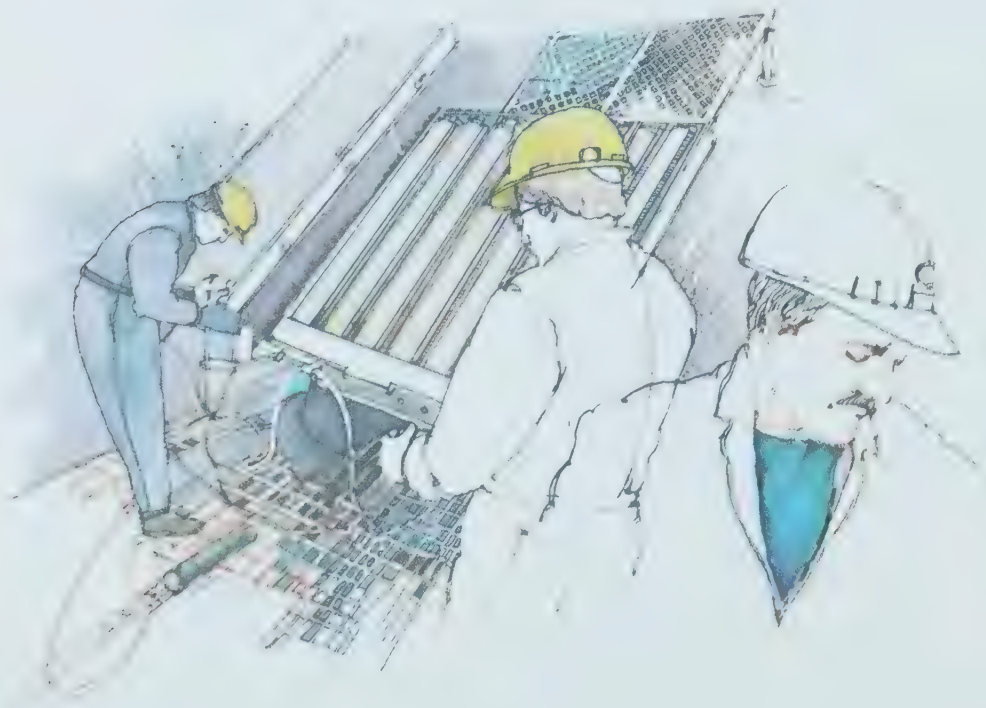
Roger Butler got the idea of combining steam stimulation and the force of gravity to drain oil from porous rock in the mid-1960s and has been refining it ever since. To make this process efficient he needed horizontal wells. "It's an entirely Canadian development," he points out. "Some people have been skeptical about it."

He hopes that soon no one will be skeptical any more, since it looks as if those years of research will pay off: Esso Resources' horizontal pilot project is showing signs of being a significant success. Charting the behavior of ice, developing horizontal wells — both projects help unlock new sources of hydrocarbon energy. A third, perhaps the most challenging, is the tight-gas-sands study.

Vern Larson shows you what looks like ordinary sandstone. Solid as a rock, you'd say. Actually, it is a million times less permeable than the tar sands. But trapped in this rock, beneath the thousands of square kilometres of land in the Elmworth area of Alberta, is perhaps as much natural gas as in all Canada's current proved gas reserves. A year ago Larson set up a research group to learn how to squeeze it out.

"We do not assume we know anything about this," he says. "Some skeptics say we will never be able to get the gas out economically. How do they know? Of course, we don't know what will work and what won't. That's why we're in the research business."

The skeptics, of course, could be



right. There are dry holes in research as well as exploration. But you don't know until you dig.

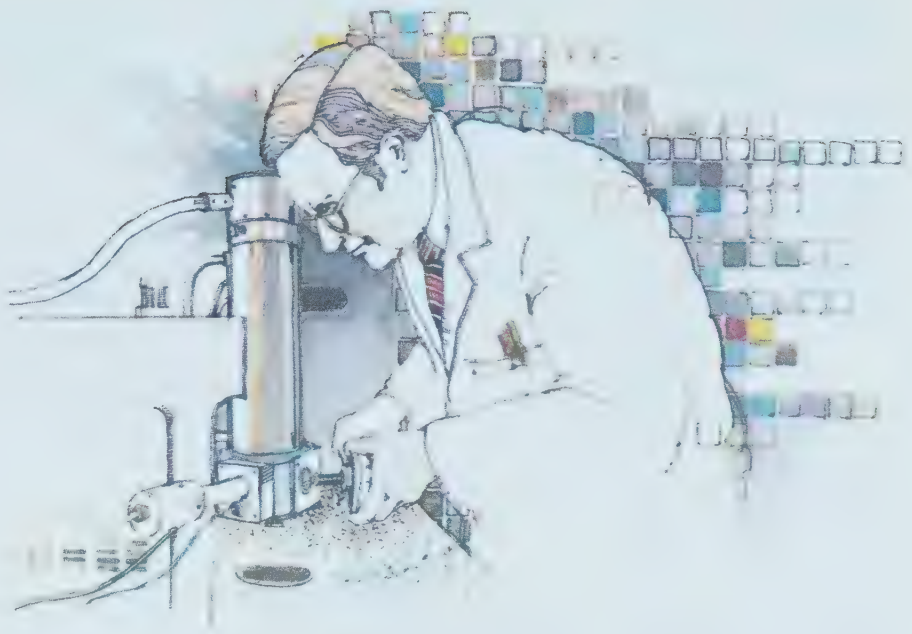
In a complex and competitive business like the oil industry, which often has to operate in unknown or unkind weather and terrain, success and even survival depend a great deal on constant advances in technology. Imperial's policy is to do as much of the research that leads to these advances in Canada as possible. Canadian research is tailored to our needs. It is more quickly and easily and economically put to work.

Canadian R and D such as Imperial's provides challenging jobs for engineers and scientists. As Waleed Jazrawi, manager for production research at Calgary, puts it, "You're also building a strong human resource of technically competent people trained in problem solving and innovation." And he goes on. "The more innovative people you have around the brighter the technological future of the country."

The need to protect a competitive advantage keeps any industrial laboratory from publishing its work as freely as a university. In spite of that restriction, a good deal of Imperial's work spills over to fertilize other research. Sarnia scientists have made presentations at each of the 10 prestigious World Petroleum Congresses so far, a record no other Canadian group and no other Exxon laboratory can match. The Calgary researchers have 20 presentations or publications scheduled for 1980, to groups such as the American Geophysical Union and the Canadian Institute of Mining and Metallurgy, on topics such as "Tertiary Paleocene Fossils" and "Ice Forces on Wide Structures." At a teach-in on exploration at a meeting of the American Association of Petroleum Geologists, two of the three lecturers were from Esso Resources.

In addition to exchanges of information, there are project grants to universities in research areas from paleontology to data processing and separate awards from the company for basic studies totaling almost $600,000 in 1980.

But while Imperial believes in Canadian research, it doesn't believe in re-inventing the wheel. No country, no company, can hope today to be entirely independent of outside



technology. "To try to be completely self-sufficient would be absolutely disastrous for our standard of living," John Tiedje says. "If we thought that way 100 years ago, we'd still be using wheelbarrows and bicycles for transportation."

In his view, the multinational corporation is one of the best methods yet devised to get technology from where it is developed to where it is needed. And the way Imperial shares in Exxon's worldwide research program, he and others believe, benefits both the company and Canada. The Exxon family pays part of the cost of Imperial's research in Canada and shares the benefits. Imperial in turn, with a relatively modest contribution to the cost of Exxon's worldwide research, has access to the results of all of it.

That gives it access at lowest possible cost to a huge pool of scientific work. Canadian customers benefit from these advances — for instance in the powerformers and fluid catalytic crackers developed through Exxon research, which are essential components in all Imperial refineries — without having to pay the full research cost.

The decisions on what research Imperial will undertake are made in Canada, by Canadians. As Larson says, "We decide what we ought to do to solve *our* problems." But those problems, for instance in producing from heavy oil and the tight gas sands, are often problems for others in the Exxon family, who contribute to their solution. Of Roger Butler's $3-million research budget in heavy oil, $2 million comes from Exxon.

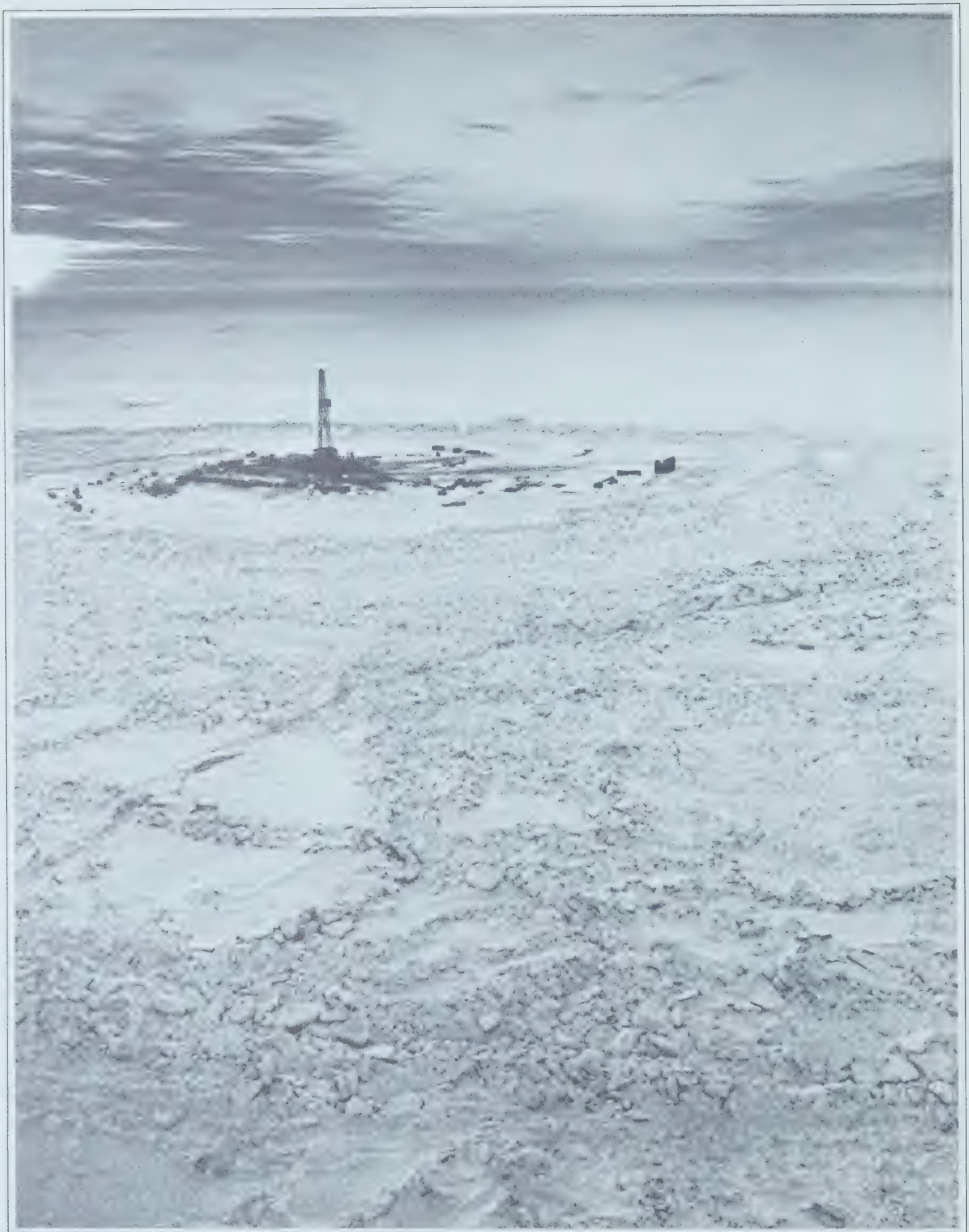
Without mutualized research through Exxon, a company such as Imperial would have to spread its researchers thinly across the whole field of producing and processing petroleum. "We'd be able to have only a handful of people trying to cover lube-oil processing," Dave Shaw points out. "As it is, we can build real expertise." Roger Butler agrees. "As Canadians, we get a good deal."

In fact, Imperial's "world technical mandates" cover a number of fields — heavy crude recovery, lube process, polyvinyl chloride plastics, base oil quality, and grease formulation.

As Imperial grows, its president, J.G. Livingstone, says, it will enter a new era of investment opportunity and a new era of research will be needed in support. More efficient extraction, more efficient products — in research, he says smiling, you are never really finished.

Those are the business needs and opportunities that, in his view, encourage research. A "shotgun" approach, he cautions, may be neither effective nor productive.

"Business will do research where it sees opportunities," he says. "It's a political misconception that a bundle of research, by itself, is all we need for everlasting prosperity." □



The search for oil reaches far into the North, to Issungnak, one of Imperial's 16 artificial islands in the Beaufort Sea

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SUN, SHADOW AND SPRINGTIME

STANLEY PARK

The great green heart of Vancouver

BY PAUL GRESCOE

PHOTOGRAPHS BY HENRY TREGILLAS

THE wee retired woman in white polyester pants was bounding off the pitch-and-putt golf course in Vancouver's Stanley Park when she spotted the gardener. "Cookie!" she shouted. "What's that yellow tree behind 11? Behind the rhododendron?" Alleyne Cook, his pewter hair peeping from beneath a navy cap, his face as creased and folded as a leprechaun's, answered in a soft New Zealand accent: "It's a robinia, called Sunburst. It's one of the few hardy plants that will grow on the Prairies."

On a nearby trail in the park another little old lady approached a forestry worker as he was slashing a surfeit of underbrush. "Don't take so much out!" she barked at the startled man. "This is where my birds feed." The workman patiently explained that the brush would grow back much more densely and enhance her bird haven. As forestry foreman Herb Johnson would say later: "This is the people's park. We just work here."

If the people of Vancouver seem prying and protective about their park, it's no wonder. The 404 hectares of lordly wildwood and English country garden — what might result if Mary Poppins moved in with Robinson Crusoe — are at once the most unspoiled and yet carefully cultivated of any urban park in Canada. And this verdant peninsula of lawns and forests, fringed by the sea and soothingly situated on the verge of a frenetic downtown, is the largest natural park in any city in Canada. For virtually every visitor to Vancouver, Stanley Park is the single tourist attraction that simply must be seen.

For residents, who use the 94-year-old park as both tranquilizer and stimulant, it is much more than a place to have a pop-and-potato-chip picnic. They may dine on roast pheasant in champagne sauce with truffles in the paneled men's-club ambience of the Beach House, on seafood or a sandwich at three other restaurants or munch on a hotdog from one of the six concession stands. They may play cricket, soccer and rugby on grass fields, golf on a condensed 18-hole course or play tennis on 21 courts. Some in spring rent roller-skates and bikes for bosky rides through the park, in summer swim and fish off its beaches, in the rainy autumn feed the resident Canada geese and the insatiable squirrels and in the colder winters skate on frozen Lost Lagoon.

Children take archery lessons in the park and learn the rules of the road at a sylvan traffic school. Whole families sit amid the scent of cedar and Douglas fir at the Gilbert and Sullivan operettas and Broadway musicals of Theatre Under the Stars; they square-dance and disco outdoors in the summer twilight on Ceperley Meadow. There are formal fishing derbies for kids and dog walks for

A sweep of timber
in the centre of a large city,
the park acts as a tranquillizer,
stimulant and the inspiration of poets

canine fanciers. Runners hold an annual marathon on the meandering roads, and each New Year's Day people join the Polar Bear Club by jumping in the raw ocean off Stanley's beaches. Cyclists pedal around the park to raise money for worthy causes (a trio of men spent two weeks on their bikes to prompt donations for the Cambodian refugees), and community groups walk the seawall circling the park to earn financial pledges (as many as 8,000 boy scouts and their families have hiked 10 kilometres on a Sunday in spring). While perhaps a couple of hundred locals regularly tread the forest trails, most casual strollers use the popular 9-kilometre seawall promenade along the shoreline from English Bay to Coal Harbour — many with binoculars in hand to observe the world's ships waiting offshore amid an abundance of migrant waterfowl.

To see marine life up close, three-quarters of a million tourists and residents each year patronize the park's Vancouver Public Aquarium. It's Canada's finest, with exhibitionist beluga and killer whales and 5,000 other specimens, which include voracious piranha and primitive lungfish in a $2-million tropical river exhibit opening this year. Close to four million people annually wander through the modest main zoo — monkeys and kangaroos, polar bears and penguins — and through the children's zoo, where lambs, kids, calves and piglets run free to be fondled by charmed youngsters.

Oh, there's the Nine O'Clock Gun, a naval muzzle-loader electronically fired at 9 each night (when it hasn't been stolen by pranksters). And the miniature railway which carries 80 passengers past wolves and deer. The Lumbermen's Arch, an immense cedar log resting on two tall stumps. The Hollow Tree, perhaps eight centuries old, with a burned-out interior big enough to hold an automobile. And the grove of brooding Haida and Kwaikutl totem poles, the 5,000-plant rose garden, the 211 hectares of trees .... As west-coast journalist Bruce Hutchison wrote of Stanley Park in *The Unknown Country:* "It was one of the few sensible things done in our youth, the preservation of this sweep of timber in the centre of a large city, with its beaches, rocks and cliffs, undefiled."

The decision that prevented loggers from leveling the rain-forest peninsula was taken not by civic officials but by the pioneering Royal Engineers. They set the land aside for the government of the colony of British Columbia in 1863, when bear, cougar and wildcat prowled through its woods. It was a military reserve when Vancouver was born in 1886. Enlightened self-interest led businessmen — aware of parkland's penchant for raising nearby property values and attracting tourists — to recommend that the city acquire the site from the federal government. And the petition to Ottawa was the first resolution of the new city council. In 1887 Ottawa agreed to relinquish the park temporarily, with the provision that the military would eventually have to use the reserve again. In fact, after strenuous lobbying Vancouver was allowed in 1908 to take a 99-year renewable lease — strictly for park purposes.

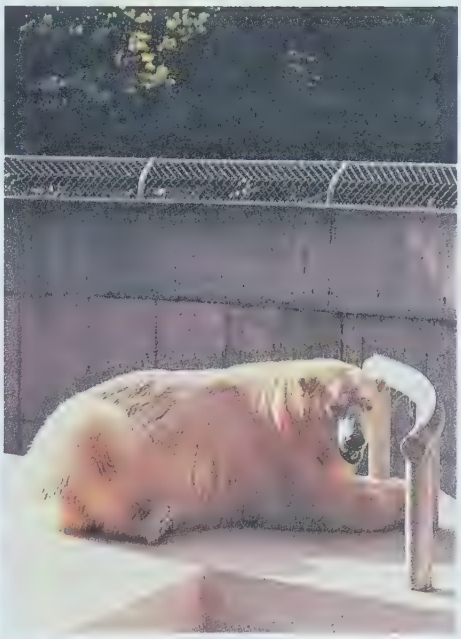
Throughout the 19th century the peninsula had been home to the once-dominant Squamish Indian tribe that in 1792 showered feathers of greeting on the English explorer Captain George Vancouver when he sailed near their coastal capital of Whoi-Whoi (where Lumbermen's Arch now stands). When the land became a park, only a few Indians and white squatters remained on the site. The last to leave her home there was Aunt Sally, the widow of an influential Indian named Howe Sound Jim; one of their daughters married an alderman on Vancouver's first council. Old Aunt Sally withstood a decade of legal pressure to evict her from the park, and only in 1930 did she agree to sell her ramshackle hut for $17,500. Years later the Squamish Indian chief who became a Hollywood actor — Dan George — would lament: "I was born in an age that loved the things of nature and gave them beautiful names like Teswull-u-wit instead of dried-up names like Stanley Park."

The park is named for Lord Stanley, the Canadian governor general who dedicated it in 1889. The first park ranger, Henry Avison, cut the original trails and grew the first gardens. He lived in a cottage on the peninsula with his wife, who opened the first zoo: a bear on a chain which once clawed the skirt of a minister's wife when she poked it in the ribs with her umbrella. Other wild animals continued to roam the forest: bulls that ran amok after their Indian keeper died and a cougar that was hunted down and shot in 1911.

That year the park board reported some of the accolades the young park was receiving in the international press. Elbert Hubbard, the distinguished American author and publisher, wrote: "There are parks and parks but there is no park in the world that will exhaust your stock of adjectives and subdue you to silence like Stanley Park in Vancouver."

Among its admirers was Pauline Johnson, the daughter of a chief of Ontario's Six Nations Reserve and his English wife. A popular poet, she came to Vancouver in 1895 and was smitten by Stanley Park. The city archives tell the charming story of how she named Lost Lagoon: "She lived in the West End, and on sunny afternoons was accustomed to go to Coal Harbour, then an arm of the sea, to paddle her canoe. One afternoon she went for her favorite pastime, but the tide was out and the shallow shore was mere mudflat. She was distressed to be denied her pleasure; her lagoon was lost. In her chagrin, she went home and composed her beautiful poem, 'It is Dusk On the Lost Lagoon.'" The lagoon is now locked in by a causeway. When Pauline Johnson died, her ashes were buried near Siwash Rock, a high pinnacle off Stanley Park which bears a plaque recalling a legend about an unselfish Indian who was preserved in stone.

Vancouver's passionate affair of the heart with Stanley Park has a long history, as demonstrated by the traffic statistics recorded there on a summer Sunday in 1911: 191 cars, 367 rigs, 52 hacks, 58 saddle horses, 148 bicycles, 173 dogs and 21,700 pedestrians. At the time there was no convenient way



From polar bears to totems to formal gardens — working in partnership with nature to create an artless splendor

to walk the shoreline in the park, but three years later planning began for a seawall promenade, a project that would take master stonemason James Cunningham 32 years to complete.

The public and its elected park board have routinely protested any threat — real or perceived — to the sanctity of Stanley. In 1906 the Vancouver Moral Association tut-tutted about the one-piece bathing suits seen on the park's beaches. When a dog killed a live-in peahen in 1926, the board fearlessly billed its master, a local magistrate. The board had less success in its opposition to the road to Lions Gate Bridge that sliced through the park in 1938. As humorist Eric Nicol noted in his book *Vancouver:* "It was freely predicted that motorists who used the swath of concrete desecrating the natural forest would bear a curse — a prophecy which proved entirely accurate. The three-lane cut was to be the most unkindest of all, to future commuters caught in traffic backups."

The controversies continued. Seawall strollers have long objected to bicycles on their promenade, and a couple of years ago the park employed a quartet of students to make the cyclists dismount. More recently there was a similar uproar over roller-skaters, who were finally given their own paths. Any attempt to charge a fee for the tennis courts is met with organized resistance by the regulars, who use the park's facilities so religiously that they've established an unofficial pecking order that puts the best players on the courts closest to the Beach House.

The most inconsequential details of park administration can become matters of public debate — exemplified by the furor over the mounted policemen's horse manure. When the five city policemen patrolling the grounds on horseback were asked last year to report the exact locations of their animals' transgressions, a *Vancouver Sun* editorial huffed: "If the policeman is indiscreet enough not to report his mount's indiscretion, what then? Is he stripped of his saddle, forced to walk behind the horse or what?"

The Stanley Park staff has to worry about more than one kind of dung. The families of great blue herons that secrete themselves high in a few Douglas firs near Theatre Under the Stars are slowly killing the trees with their droppings. Man's carelessness is another concern: thoughtless picnickers, for instance, have thrown glowing barbecue coals at the base of trees and caused fires. Yet there have been no major blazes in the park. "I don't think a fire would ever get away on us," says forestry foreman Herb Johnson. "The people themselves, the regulars, are fire wardens."

Nature herself has done more devastation: storms in 1934-35 felled several thousand trees, including some of the finest firs, cedars and hemlocks, and in 1962 Hurricane Frieda uprooted 70,000 more and forced forestry workers to comb out the thick underbrush and rotting stumps that gave the rain forest so much of its wilderness character. The following spring, more than 22,000 Douglas firs were planted to reforest the park.

Old trees fall naturally, and Herb Johnson likes to show people the huge, rusty-looking trunk of a red cedar, four metres in diameter, at the junction of Tatlow Walk and Lovers Trail. An even fatter cedar — with its diameter of nearly six metres, the largest of any species in the park — still stands on the Third Beach Trail across from the Hollow Tree. "This is a natural forest," Johnson says. "It would be very easy to cultivate and nurture it. But I work with nature; she does the work, and I just help her along. It's been a partnership."

His philosophy sounds remarkably like that of gardener Alleyne Cook, who says: "It's got to look wild; it's a garden based on untidiness — naturalness." With only a wheelbarrow, shovel, fork, rake and snippers, Cook creates an artless splendor in his gardens in and around the golf course. His specialty is the rhododendron — there are about 200 species in the park — and he is a world expert in that diversified plant. ("Expert?" he laughs. "'X' is an unknown quantity and 'spurt' is a drip under pressure.")

He takes a visitor to a secluded hollow off the 13th hole of the golf course. "This was a swamp," he says. "I dug it by hand over three winters and wheeled in five truckloads of garbage and put good soil on top." Now it is a magnolia-and-lily oasis with a pond overhung with four kinds of ferns and the claret-colored leaves of a Japanese flowering maple. The faded root systems of two upended cedars, embroidered with salal, sit in the background like pieces of sculpture. "This is the most beautiful spot," Cook says as a duck shoots over his shoulder and lands in the pond. "And nobody knows about it."

The park is abrim with such hidden delights. The pair of bald eagles that return to nest in their treetop aerie early each March. The little-used Merilees Trail, heavy with fern and fat, fallen logs, which runs about the seawall and offers seascapes of freighters with a West Vancouver backdrop. The forgotten totem pole carved in a live tree and crowned with vines on a path beside the polar bears.

Of all the seasons in Stanley Park, spring seems the most inviting, as the sun reappears after a winter's rain and the people of Vancouver still have the park to themselves. The elderly men in their natty straw hats are back playing tire-sized checkers on a giant outdoor board. Businessmen in T-shirts and shorts run off their lunches. On the lawn near the zoo where artists display predictable landscapes and still lifes, an old Chinese woman who paints charming floral miniatures is slowly peeling an orange. She can hear the bark of a big black seal, sounding off like a semitrailer's horn while he nuzzles his lady. And beside a popcorn wagon in the zoo a tall teenaged boy is feeding peanuts to two pigeons that are perched competitively on his hand.

Always, everywhere, there are the children, who in the end take the true measure of a great urban preserve like Stanley Park. Children such as an exultant five-year-old named Amanda, who one silken spring evening is disguised in a red Superman cape and cantering along the shore of Lost Lagoon as she tries to run and perhaps even fly as fast as the 28 Canada geese fleeing calmly ahead of her. □

Nearly a century later,
e acquisition of the park
is still "one of the few
sensible things
done in our youth"

SYNCRUDE ON STREAM

The risk and reality of oil in the tar sands

BY GORDON DONALDSON

PHOTOGRAPHS BY ALEX MACDONALD

IN September 1978, as dignitaries from across the continent gathered for the official opening of the vast Syncrude oil-sands plant, fire broke out in a 20-storey fluid coker. Several days later, as an indirect result, production came to a halt. Old-timers in nearby Fort McMurray nodded sagely. They had seen it all before. Since the turn of the century men had tried to dig treasure from the famed Athabasca oil sands, only to become mired in frustration and tar. The newcomers would learn that nothing was won there without a titanic struggle.

Syncrude learned. That opening fire was only one in a series of setbacks that plagued the operation for nearly two years.The consortium, of which Imperial has 25 percent, risked more than $2 billion on the first full-scale assault on the oil sands, using machines and processes that had never been tried in a grueling northern Alberta winter; some had never been tried anywhere. Every new plant has problems. At Syncrude everything was on a gigantic scale — including the problems.

Full operations began in the early spring of 1980. That was when everything came together, all four mining trains and both cokers worked in unison, and the mammoth operation was truly in business.

Everyone believed it was technically possible, but no one dreamed it would be easy. The Syncrude partners had studied the long, discouraging history of attempts to mine the sands.

Scientists had been studying the sands themselves for generations. They are among the best known of Canada's natural wonders — a trillion barrels of oil in the form of bitumen trapped in sand. Sixteen times the oil wealth of Saudi Arabia, but umpteen times harder to get.

The oilmen knew how to extract the oil. The doubt (which caused one major partner to withdraw) was whether an operation so enormous, costly and complex could be a technical and financial success. Syncrude was a risky venture. And despite the cold computerized calculations that went into it, it was also a romantic one.

There is nothing intrinsically romantic about a lump of tar sand, more officially known as oil sand. You can crumble it in your fingers like dry, blackish-brown dirt. If you warm it in your hand it gets sticky. It's called black gold, but you can't picture it adorning the neck of a duchess. The romance stems from the heroic tales of the Athabasca adventurers who found it and the pioneers who risked their lives and fortunes for it.

Peter Pond, an aggressive Yankee fur trader who had killed a man in a duel, drew the first map of the tar sands in his winter cabin at Fort of the Forks (Fort McMurray), which he established in 1778. He later presented the map to the infant congress of the United States.

Alexander Mackenzie, who took over Pond's trading post, wrote of "bituminous fountains into which a pole, 20 feet long, could be inserted without the least resistance." Mackenzie's "fountains" became a legend of the North. More than a century later, when the value of oil had become recognized, men arrived in Athabasca expecting to find pools of it on the surface. Promoters who had obviously never seen the six-cabin Hudson's Bay post of Fort McMurray distributed brochures picturing it as an industrial centre sprouting factory chimneys and surrounded by a network of railway sidings. (The railway finally reached McMurray in 1942.)

Count Alfred von Hammerstein arrived there on horseback in 1906. His Kaiser Wilhelm mustache bristled when he found no pools of oil, but he drilled holes to various depths, hoping pools would form. All he found was salt water.

Sidney Ells, a young Canadian government mining engineer, began investigating the sands in 1913 and continued for 35 years. He was, he wrote, "enthralled" by them, and he devoted his life to finding uses for them. The Athabasca Indians used the strange dark substance, mixed with spruce gum, to seal their canoes. Ells persuaded the civic leaders of Edmonton to try paving streets with it. He shipped 54 tonnes of it south from Fort McMurray on scows pulled by teams of men with ropes. He led them and hauled with them as they struggled for backbreaking weeks along the swamp and muskeg of the river's edge.

The Edmonton politicians couldn't agree on which street to pave, so Ells had to make a second trip from McMurray. He walked 400 kilometres through the wilderness, with his cocker spaniel, carrying a pack stuffed with technical books and pork sandwiches. It took him seven days. He arrived, blistered and bleeding, on a farmer's doorstep and gasped, "I'll give you a dollar for a drink of whiskey."

As early as 1915 Ells used hot water to float bitumen free from the surrounding sand. This method was later developed and patented by Dr. Karl Adolf Clark of the Research Council of Alberta and used by entrepreneur R.C. Fitzsimmons. It turned out to be the secret that unlocked the tar sands. Each grain of sand is covered by a thin film of water and, as everyone knows, oil and water don't mix.

Fitzsimmons, a flamboyant optimist, built an extraction plant at Bitumount, 80 kilometres north of McMurray, in 1922. He tried, and failed, to melt the bitumen by steam and pump it up — the basis of the system to be used at Imperial's $9-billion Cold Lake project — then used hot water flotation to produce 200 barrels of bitumen. This was sold to roof houses until the Depression struck, and he was unable to sell any more.

Fitzsimmons struggled along, built a refinery, and by 1938 he had produced 2,500 barrels of asphalt and 2,000 of fuel oil. Still he could not find a market. His plant was eventually taken over by the Alberta government. It closed in 1949.

In 1936 Denver developer Max Ball produced diesel oil at his Abasand plant outside McMurray. But he, too, had marketing problems. World War II brought a flurry of business, and Ball was selling diesel to U.S. military contractors in 1941 when Abasand burned down. It was rebuilt but burned again in 1944. There were rumors of sabotage by enemy agents, but the fires were probably caused by carelessness, abetted by the bad luck that dogged tar-sands enterprises.

In 1947 the Leduc well 435 kilometres south of McMurray roared into life, spewing forth conventional crude that didn't cost an arm and a leg and an aching back to produce. The stubborn sands were left in peace, but not for long.

In the 1950s, Cities Service Athabasca Inc., the forerunner of

Syncrude, built a small pilot plant to produce 1,000 barrels of synthetic crude a day at Mildred Lake, 40 kilometres north of McMurray. Four companies became involved: Royalite Oil Co. (now Gulf Canada), Imperial, Cities Service and Richfield Oil Co. In 1962 they applied to the Alberta government for permission to build a full-scale plant one hundred times the size of the pilot. They were told to come back in five years. The world was luxuriating in Arab oil at $2 a barrel.

The Mildred Lake consortium, which became Syncrude in January 1964, foresaw that this blissful world of cheap, plentiful oil wasn't going to last. The sleeping tar sands must be aroused. They were. In 1964 Great Canadian Oil Sands Ltd. (now Suncor) got the go-ahead for a plant with less than half the capacity of the Syncrude project. This was completed in 1967. Its first five years of operation were horrendous. In winter the sands turned to rock, wearing out machinery and tearing conveyor belts. Its one coker kept breaking down. It lost $90 million in five years.

Syncrude watched, undeterred. It applied again in 1968, then in 1969, when it received permission for an 80,000-barrel-a-day plant, providing it did not go into production until 1976. Not until September 1973 did the consortium and the government reach agreement on royalties.

By December 1974 the $1-billion project had become a more than $2-billion venture. On December 4, 1974, Atlantic Richfield withdrew from its 30-percent ownership, bringing the financial problems to a crisis. The remaining investors set a deadline of two months; if new investors were not found by then, Syncrude would fold.

With Imperial's Jack Armstrong taking the lead, the search began. Finally, on February 3, 1975, after a

grueling round of negotiations at a hotel just outside Winnipeg, an agreement was worked out. The new partners were the federal government with a 15-percent share, Alberta with 10 percent and Ontario with five percent. Ironically it was mainly the soaring world price of oil, on which Syncrude relied for eventual profits, that had sent construction costs skyrocketing.

"We anticipated the crude price increase — at least a big chunk of it," says Imperial's chief executive officer, Jack Armstrong. "We could see it coming. You couldn't build a tar-sands plant on crude that was selling for $3 or $4. By the same token, we hadn't planned on costs going up to that degree. The inflationary factor caught us, but at the same time the crude price moved — fortunately. Otherwise Syncrude would not be operating today."

From the start, Syncrude sought the world price for its crude. And it stipulated that its plant not be ordered to reduce its output if there was a surplus of oil. (Conventional oil wells are cut back when supply exceeds demand, but tar-sands production is too costly to halt.) It also fought for, and received, permission to turn out 125,000 barrels a day, since a rate of 80,000 would not be economic.

By 1977 almost 7,500 workers had moved onto the site of one of the biggest construction jobs in Canadian history. It was Imperial's largest single investment to date. "Certainly it was a risk," Jack Armstrong admits. "About $600 million worth of risk for Imperial. But because of political and economic uncertainties, not because we couldn't develop the technology.

"We knew the oil could be separated, upgraded and used in a refinery. What I call the washing-machine process was known in the twenties. You add hot water, agitate the whole thing, skim off the heavy oil, then put it in a coker to upgrade it."

The first of four giant draglines took its first bite on June 24, 1977, scooping up a hundred tonnes of dirt in its bucket. These electrically driven marvels, weighing more than 6,000 tonnes and costing $30 million each, are Syncrude's most dramatic tools. Swinging their 100-metre booms and walking on two great flat feet at the dignified speed of 225 metres per hour, they shift more tonnage per day than all the iron ore mines in Canada.

They began by moving the "overburden" — the surface layer of scrub, moss, earth and rocks that covers the tar sand. Then they began mining and stockpiling the tar sand.

By the following winter they had piled up 4.5 million tonnes of tar sand into a "windrow" three kilometres long. It was ready to be scraped up by revolving scoops on bucket wheel reclaimers (which cost a mere $15 to $20 million each in the early 1970s) and dumped on conveyor belts.

Problem One: The tar sands refused to budge. "That windrow was subject to the wettest fall we'd ever had in this country," says Jim Guthrie, Syncrude's senior vice-president of operations, who retired at the end of 1980. "It froze into a solid mass like steel. The bucket wheel reclaimers were built to handle sand, and they couldn't do it. We crushed the windrow by driving tractors over it, but we were left with hard lumps

Syncrude's bucket wheel reclaimers and draglines: giant machines for a titanic struggle

weighing tonnes that could stick in the conveyor belts and cut them. It took all that winter and spring to get the machinery repaired and operable."

The bucket wheels were modified so that they didn't pick up big lumps. As the plant got into operation, windrows were demolished before they had time to solidify and turn rock-hard.

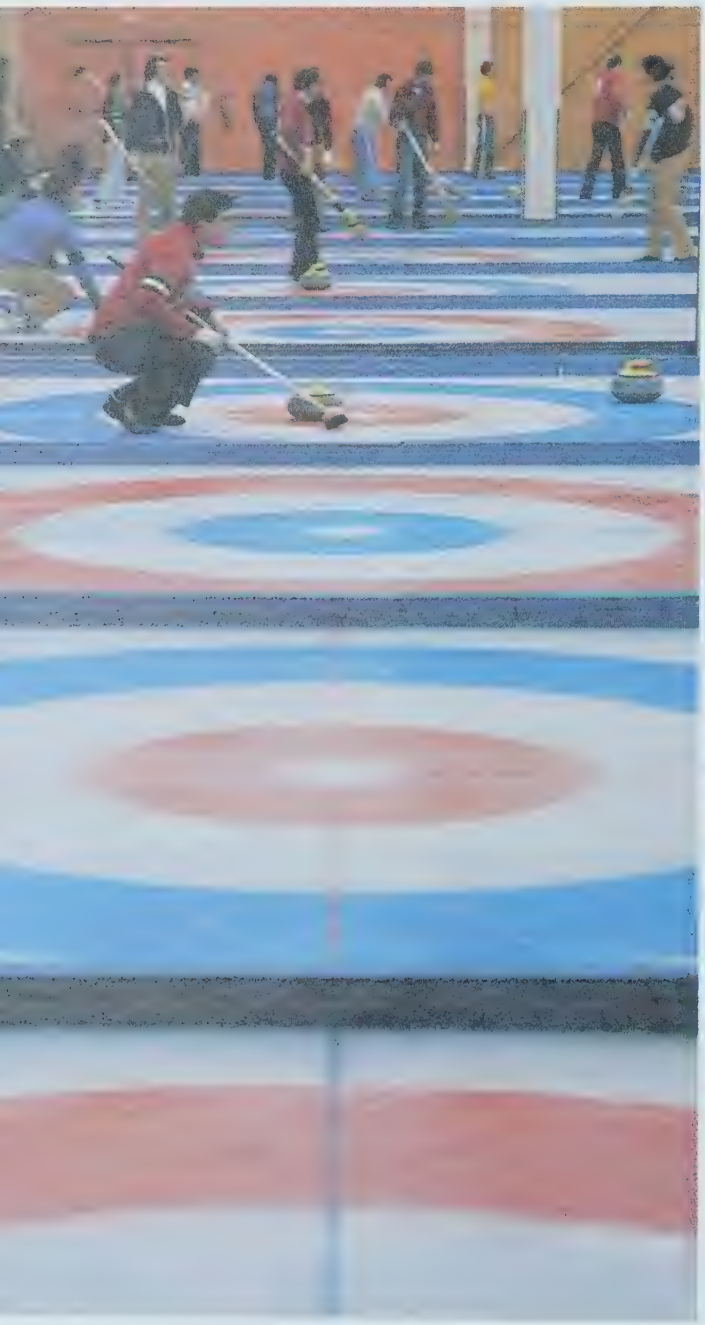
Meanwhile — Problem Two: The two cokers, largest in the world, refused to start up in 35-below temperatures. "Instruments and lines froze, and we had to operate them almost manually. That's like flying a 747 with no instruments or hydraulics," says public affairs director John Barr. "That first year was just one thing after another."

Jim Guthrie continues: "In 1979 we had both cokers running, but in February 1980 we had to shut one down for maintenance. Then we lost the other and were down to no cokers for one month. Everyone cooperated magnificently. We took miners from the mine and put them inside a coker to clean it out. They were mining coke .... One even arrived with a miner's lamp on his hat.

"We got both units going in March and they're going great."

Problem Three: The overburden wasn't strong enough to support the giant draglines near the mine face. They had to sit well back, where they couldn't operate efficiently. And the hills of overburden they piled up tended to collapse and slide down into the oil sand. So the overburden had to be stripped by earthmoving equipment, adding another stage to the mining operation. The draglines were put to work on the oil sand itself, moving along broad, smooth roads like asphalt highways.

By the fall of 1980, with all systems go, Syncrude was pumping between 100,000 and 120,000 barrels a day along the pipeline to Edmonton. After



Fort McMurray: the tar-sands town is also a centre for sports, theatre and vintage wine-tasting. "When a town grows like this, the human energy is incredible"

"debottlenecking" — industry jargon for fine-tuning those systems up to their maximum capacity — it should average 130,000 barrels or nearly seven percent of all the crude produced in Canada.

Jack Armstrong was delighted. "Everything came on stream pretty well according to plan. There were bumps and questions and people holding their breath, but the people who engineered it, constructed it and got it into operation have my highest praise."

Jim Guthrie, an Imperial veteran who saw Syncrude operations through their tough start-up years, retired at Christmas, content with the outcome.

As Suncor and Syncrude solved their problems and settled down, so did Fort McMurray. It solved perhaps the biggest problem of all by transforming itself from a sleepy community of 1,100 to a city of nearly 30,000 inside 20 years without falling into chaos, crime and anarchy. There were a few difficult years, but nowadays it's rather sedate.

Judi Dicks, community editor of the daily *Fort McMurray Today,* lived through eight of the boom years, in which construction workers swarmed in by the thousands, followed by thousands of permanent employees.

There were stresses and strains, long lineups at banks and stores, jam-packed restaurants and bars and perpetual traffic jams as the streets were blocked by construction. "But nothing terribly awful happened. People had the feeling 'this, too, shall pass.' And it did. Looking back we felt we were part of history and wished we'd done more to record it. When a town suddenly grows like this the human energy produced is incredible. It's exhilarating, vibrant."

The newcomers came from all over the world, so McMurray now has 55 ethnic and cultural groups, from Newfoundlanders, the biggest, to Chinese, Australians, English who play soccer and Welsh who play rugby. The city celebrates them with a folk arts festival.

"We don't have a National Arts Centre," Dicks admits, "but we do have an interesting cultural life. We have a brand-new theatre, now producing *Oklahoma!,* an almost first-run movie theatre and an art-film society. And 300 racquet-ball players, 1,200 curlers and 4,000 young hockey players."

She punches out a story on her computerized video display terminal. It's not about shoot-outs or barroom brawls. Fort McMurrary will host a round in a national contest for the champion taster of vintage wines.

The city, now the largest north of Edmonton, is preparing for a new influx of people if the Alsands megaproject goes ahead.

After the success of Syncrude not even the most skeptical of old-timers doubts that it and the other megaproject, the Cold Lake oil-sands plant, are technically feasible. The oil sands have been conquered and can be again. They are the key to Canadian self-sufficiency in oil. But future projects face the same economic and political uncertainties Syncrude did.

"There is no question that Canada can be self-sufficient by 1995, through oil sands, northern resources and other oil," Jack Armstrong declares. "But before new projects can go ahead, there has to be a consensus among governments, the oil industry and the public. At this point in our history, Canadians have a unique chance to eliminate the need for risky foreign supplies. The choice is ours." □

NOW PLAYING: CONSERVATION

An Imperial film free for the asking

BY DOUG TINDAL

PHOTOGRAPHS BY RON COLE

THE first thing you might wonder about, when you hear that Imperial Oil is making a film about energy conservation, is — why? Imperial is in the business of selling energy, so why should it want to promote conservation? Gordon Hinch is Imperial's manager of film production and promotion, and he points out that Imperial has as much at stake as anyone else in trying to manage resources wisely: "There's no doubt that industry in general wants to see energy used efficiently, to help reduce the demands on our sources of energy. In particular, we hope this film will show people how they can save energy without any drastic changes in their life-styles."

The second thing you might wonder about is whether anybody really needs a film about conservation. Haven't we already heard everything we need to know about saving energy? The answer is that we may have heard it, but we haven't paid much attention. According to the federal department of energy, mines and resources, when it comes to home heating we're saving only half as much energy as we could — even though the government will help to pay for insulating most homes.

So Imperial's film, called *Leaving Something Over,* approaches energy

Director Peter Rowe and Gordon Hinch (left) discuss the next scene, while associate producer Michael Maltby (at centre, bottom left) supervises the Sturgess' search for an energy-efficient car (bottom right)

conservation from a fresh angle. It tells the story of two fictional Canadian families: Yvon and Simone Carrier and their two children, who live in the city, and Jake and Penny Sturgess and their baby, who live on a small farm. It shows how they go about trying to save energy, and the interesting thing is that the film provides almost as much entertainment as it does information.

Gordon Hinch explains: "We don't just want to tell people how to save energy. After they see this film, we would like them to come out of the auditorium feeling as though they ought to rush home and insulate the attic. So we don't lecture or preach. We try to entertain and charm. We hope people will find the families in the film attractive, engaging people, and the theory is that if you like them and enjoy meeting them, you'll be motivated to follow their example."

The importance of the film's conservation message is evident even at the earliest stages. The script for *Leaving Something Over,* unlike those of many films, has to meet a number of requirements beyond simply telling a good story. In the first place, it must be informative. In the second, it must be meticulously accurate in every detail. It must give Canadians the best possible advice on how to save energy in their heating, insulating, cooking and driving.

So Gordon Hinch sends the script out to the federal and provincial departments of energy, to give experts in each area a chance to make comments and suggestions, and Imperial brings in its own battery of experts to check out all the facts. Building Products of Canada Limited, an Imperial subsidiary, lends its expertise with insulation materials and techniques. Esso Home Comfort sends a representative who knows all about furnace maintenance. Imperial provides its senior technical specialist on gasoline consumption to take a look at the scenes that deal with buying and servicing cars.

What with one thing and another, the script goes through five rewrites before all the experts are happy.

And this is only the beginning. When the script is finally ready, Hinch assembles the group of people who will actually make the film, and the questions begin again. The script has Jake Sturgess asking his furnace man, "Can you tell me why the soot builds up here?" and the art department asks, "Where?" It needs to know precisely where the soot builds up so it can make sure that the furnace in the scene has soot in the right place.

You get a good idea of the way the film works from the scene in which Yvon Carrier, played by Marcel Sabourin, takes his car in for a tune-up. As most people know, a well-tuned car uses less gas. The idea behind this scene is that Yvon will look aghast at the cost of the tune-up, and then the mechanic will explain to him just how each step saves energy. But to make the scene more entertaining, the mechanic is played by a magician, Jefferson Mappin. When he talks about changing the spark plugs, for instance, he conjures the plugs out of thin air.

Weeks before the filming begins Joe Hampson, who's in charge of props, sends a set of spark plugs to the magician so he can practise with them; at the same time he makes a note to check with Imperial's automotive specialist — he wants to be sure the spark plugs that appear in the film are the right kind for Yvon's car. In the end, however, special miniature spark plugs are used; the normal size are too large for the magician to work with.

Later in the same scene, the magician is supposed to pull a rabbit out of a tire (while he explains how radial tires save energy), and Joe Hampson is a little concerned by the fact that the magician doesn't have his own rabbit. Hampson is an old hand at scrounging up unusual props, but this is the first time he's ever needed a rabbit.

The job gets more complicated when Gordon Hinch and Peter Rowe, the director, decide that the scene just doesn't have enough zip. They change things around a bit, and Rowe explains the changes to the crew at a production meeting: "We're going to have the magician produce the rabbit earlier in the scene and put it down on the floor. Then, at the end of the scene, the camera will pan down to the floor, and we'll see about three dozen rabbits there." Hampson gasps.

Leaving Something Over has a special problem because it's actually two films, one English and one French. Michael Maltby, the associate producer, explains: "Usually when a filmmaker deals with the problem of

other languages, he films entirely in one language and then just dubs in the others. So you end up with two or more sound tracks for one film." That system, Maltby explains, creates the problem of "lip flap" — lip movements that don't match the words on the sound track.

"In *Leaving Something Over,* however, we're actually shooting in two languages. With a few exceptions, the actors will perform each scene twice, and we'll film it once in English and once in French. Naturally, this makes it an expensive film — the budget is about $270,000 — because right off the top it doubles the performers' budget. And it takes incredible organization and stamina to be able to give two good performances back to back."

Maltby spent several years with the public affairs department of CBC Television before leaving to form his own film production company. Since then he's made films in several parts of the world — including an orientation film for Bell Canada employees who were going to work in Saudi Arabia — and he points out that Canada is the only country in the world where filmmakers use this approach: "In Europe, when they make a film with actors who speak different languages, they just ignore the problem. They don't record any sound during the filming; they dub it in afterward, in the studio. The way we're doing it may be more difficult, but I think it's the best way."

Fortunately the film's director, Peter Rowe, has some experience in this process. Last year, for example, he directed two pilots for a series of historical dramas called *The Spirit of Adventure,* which were shot in both languages. "As a matter of fact," Rowe adds, "I recently directed a film in Swedish and another in Slovenian, even though I don't speak either."

Leaving Something Over includes a song-and-dance number which focuses on saving energy around the house, and Rowe says it was a particular treat for him to direct this part because musical numbers are rare in Canadian films. A director usually has to move to Hollywood before he gets a chance to work with song and dance. "Also, I like the high style of the scene," he says. "The singing and dancing have no basis in reality — normal people just don't act that way in their homes — so it's pure show business, and it's a lot of fun."

The number begins with a scene in the Carrier living room. Yvon Carrier has spent the day insulating, caulking, sealing and weather-stripping, and now he and Simone are relaxing over a drink. Yvon begins to brag. "A fine day's work," he says. "I have saved us incredible amounts of energy — with the training of an engineer, anything is possible." Simone, played by Yvonne Laflamme Tetreault, decides to teach Yvon that you don't have to be an engineer to conserve, so she pulls him to his feet and then propels him through the house, showing him how she saves energy in each room. (In the kitchen, for example, she points out that when she has the oven on to cook a roast, she bakes a pie at the same time.) The fun part is that she does the whole thing in song, set to a tango beat.

"It's a nice bit of fantasy," Rowe says — and when you see the final version, you have to agree. But the process of filming the number is exhausting. The first scene of the sequence, when the actors move from the living room to the kitchen, is on the screen for only about 30 seconds, but it takes the better part of two hours to shoot. Part of the trouble is the actors' movements: they look smooth and straightforward, almost unrehearsed, when you see them on the screen, but an immense amount of effort goes into making each step perfect. Another problem is that it's a long shot — the actors walk across the room and the camera moves with them — and it's almost impossible for the fellow who holds the microphone to stay with the actors and still keep off camera.

Rowe and Brian Macdonald, one of Canada's best-known choreographers, work through the scene a dozen times, and finally the effort pays off. The scene is perfect. Then they start all over to do it again in French.

On the whole the film is light-hearted, but among the chuckles it packs a lot of information about how Canadians use energy and about how we could use a lot less. The sad fact is that we consume more energy per person than any other country, and a startling amount of this energy goes not to business or government but to individuals. Heating our homes, running our appliances and driving our cars uses up more than a third of Canada's energy. With conservation

Yvon gets advice from a gas company serviceman (left) and a magical mechanic (below and bottom left). In song and dance, Yvon and Simone celebrate the joys of the conserver life-style (bottom right)

we could save a large portion, and we'd take a big chunk out of our energy costs.

You have to remember that conservation doesn't necessarily mean cutting back; it means cutting down on waste. It's the sum total of a lot of little things that make good sense: insulating your home and sealing the cracks around doors and windows could save you almost 40 percent on heating costs; replacing an outdated burner on your oil furnace could save up to 20 percent; driving at 90 kilometres per hour instead of, say, 110 saves a dollar out of every $5 you spend on gas, and you'll save another nickel on each gas dollar if you drive with properly inflated radial tires.

Gordon Hinch is producing a brochure that includes these suggestions and the other energy-saving tips in the film, and the brochures will be available for schools and other groups that want to show the film. "Film is a very good medium for motivating people," he explains, "but we really don't have time in the course of a half-hour film to show people how to do everything — how to make a draft detector, for instance. So the brochure gives a bit more detail about some of those things, and it also tells people where to find more information about conserving energy."

The film came out early this year and will be shown publicly across the country in cooperation with building supply companies and the energy and conservation branches of the provincial and federal governments. After that it will be available for television, and schools, libraries and community groups can arrange to borrow it free of charge through one of Imperial's regional film distributors (see box).

If you were to follow all the energy conservation ideas in *Leaving Something Over,* you might be surprised to find that they'd make very little difference to your style of living — just a big, big change in the amount of energy you consume. Obviously this has an immediate payoff in savings. But as the film's title implies, there's another payoff farther down the road: conserving energy today can be one of the factors in making sure there's enough for our children tomorrow.

After all the rest is said and done, maybe this is the thing that will get us to turn back the thermostat, and ease up on the gas pedal, and change the filters in our furnaces, and .... □

Leaving Something Over is only the latest addition to the surprisingly large collection of Imperial Oil films. They range all the way from *The Great Canadian Energy Saga,* an animated film which documents the history of energy in Canada, to *The Loon's Necklace,* one of the best-known short Canadian films, which tells the Indian legend about why the loon has white stripes around its neck.

You can write for a catalog or arrange to borrow the films (at no charge) by contacting the Imperial film distributor closest to you:

IMPERIAL OIL LIMITED,
FILM LIBRARY SERVICES,
196 JOSEPH ZATZMAN DR.,
BURNSIDE INDUSTRIAL PARK,
DARTMOUTH, N.S.
B3B 1N4 (902) 463-2335

CITY FILMS DISTRIBUTION
LTÉE./LTD.,
4980 BUCHAN ST., SUITE 301,
MONTREAL, QUE.
H4P 1S9 (514) 735-2246

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CALGARY, ALTA.
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History as told

Oral history is the sound of our past

BY ANTHONY TILLY

ILLUSTRATIONS BY MURIEL WOOD

EIGHT years ago journalist Barry Broadfoot quit his job with *The Vancouver Sun*. He was determined to try a risky, demanding project that had tantalized him for years. Broadfoot never regretted his decision, for not only did it change his life, it soon affected Canadian publishing, theatre, television, teaching and history. With his project, Broadfoot established oral history in Canada.

Barry Broadfoot's work started with a journey that would take him all across Canada. He traveled about 24,000 kilometres in nine months, by bus, plane, car, train and ferry. He stopped in farm kitchens, offices, bars and hotels — wherever he could record another story of Canadian life in the Dirty Thirties.

This long journey unearthed hundreds of anecdotes. Some tales were gems, polished after years of retelling; others were painfully and reluctantly told after years in hiding. Some were humorous, others sad. But most were vivid, personal and memorable.

A farmer in New Brunswick recalled the year when the province's farms seemed to revert to the barter system. That year the average annual income for farmers there was $20. A woman from the Prairies told Broadfoot how she fought the drought, hoeing her sandy, dried-out garden with an improvised shield against the dust-filled air: "I'd put a dish towel soaked in water around my mouth, like I was a bank robber, and then I'd rub Vaseline into my nostrils."

Still another tale spanned the Maritimes and the Prairies. A young man from Saskatchewan found work loading cattle in Halifax: "I was on the dock helping the dockers get them aboard and I got to talking with the foreman and I told him I was from the Prairies. Where? Well, all over, I said,

but Moose Jaw's my hometown.

"He said, 'Well, look ye up there,' and I did and the sun was sort of faded over by dirty clouds or something and he said, 'That may be from your hometown.' I didn't believe him but it was Prairie dust, Prairie dirt, or it was dirt from Kansas or Missouri or one of them states and the high, hot winds of that summer blew it east. This is no bull. That was Prairie dust and if nothing makes you understand those days, that might."

Broadfoot knew he had assembled hundreds of gripping stories into an absorbing record of an extraordinary decade — ten lost years, as one storyteller put it. He also knew he could reach two markets: Depression survivors would want to reminisce about the familiar scenes and hardships; younger Canadians would find and feel those ten lost years for the first time. But even with good material and with a country ready to discover (or rediscover) the Great Depression, Broadfoot could not anticipate his project's success.

Ten Lost Years: 1929-1939 was published by Doubleday in October 1973. It soon hit the best-seller lists and stayed there for more than 40 weeks.

Success bred more success. The book was translated into French and sold as *La Grande Dépression*. The English version was adapted for the stage. The play *Ten Lost Years* toured Canada before being produced in England, Scotland, Wales, Belgium, Holland and the U.S.S.R. Eight years later the book's impact is still strong. As Broadfoot proudly explains, "I still get three or four letters a week from people complimenting me on that book."

The success of *Ten Lost Years* triggered a decade in which historians, publishers and writers discovered a new type of historical record. Suddenly oral history became hot news. Historians debated its merits and explored its possibilities; publishers saw its commercial possibilities and tested its markets. And other seasoned writers took up Broadfoot's craft. Allan Anderson used his 30 years experience as a CBC broadcaster to produce his first oral history in 1977. Anderson hasn't stopped since then.

Oral history. The term sounds suspicious to Canadians schooled in treaties and tariffs, leaders and legislation. But the recipe for a successful oral history is not hard to understand. With apologies to the old formula for a successful marriage, we can say that oral history needs four elements: something old; something new; something borrowed; something colorful.

Start with the something old. Broadfoot and Anderson (born in 1926 and 1915 respectively) both seek out "old-timers" in their sixties, seventies, eighties or even nineties. Some of these storytellers can recall childhoods from the turn of the century. They have not merely studied Prairie settlements, two world wars or the Great Depression; they have lived through them. Anderson emphasizes, however, that oral history is not exclusively concerned with old-timers. "In *Remembering the Farm* the age of the storytellers is from 19 to 89. Oral history begins with recollections of yesterday and ends at the farthest reaches of human memory."

Some of the old-timers have remarkably direct links to Canadian traditions that flourished in the last half of the 19th century. Normand Lafleur found this when he researched *La Vie Traditionnelle du Coureur de Bois aux XIX^{e} et XX^{e} Siécles.* Lafleur tapped the memories of trappers, traders and woodsmen who had worked the regions of Charlevoix, la Mauricie and Outaouais-Gatineau for four, five, even six decades. These men — now literally a dying breed — learned how to trap, hunt and prepare home remedies from their fathers. They perpetuated the skills of the 19th century coureur de bois and preserved a specialized vocabulary which required a 20-page appendix in Lafleur's detailed study.

But successful oral history is not guaranteed by old-timers with long, interesting lives and equally long memories. Something new must be added to the first ingredient: the tape recorder and the skill to use it.

Oral historians often interview people who can be nervous with tape recorders. So the interviewers must balance the need for a good, clear record with the need for a relaxed and nonthreatening atmosphere. Clumsy machines and intimidating microphones are out; Sony cassettes with built-in mikes are in.

In addition to its old-timers and new technology, Canadian oral history has a borrowed element to it. Barry Broadfoot and Allan Anderson did not invent its techniques. Nor did Normand Lafleur, even though he conducted interviews in the mid-1960s to supplement his written sources.

The credit for popularizing oral history and for making the recorded interview the main attraction rather than a mere sideshow goes to a unique man with an equally unique name. Studs Terkel has compiled three great oral histories in the United States: *Hard Times* chronicled the Great Depression; *Working* collected Americans' thoughts about their jobs, ranging from presidents to prostitutes, from hairdressers to hockey players; *American Dreams: Lost and Found*, his latest book, surveys the hopes of ordinary and extraordinary people.

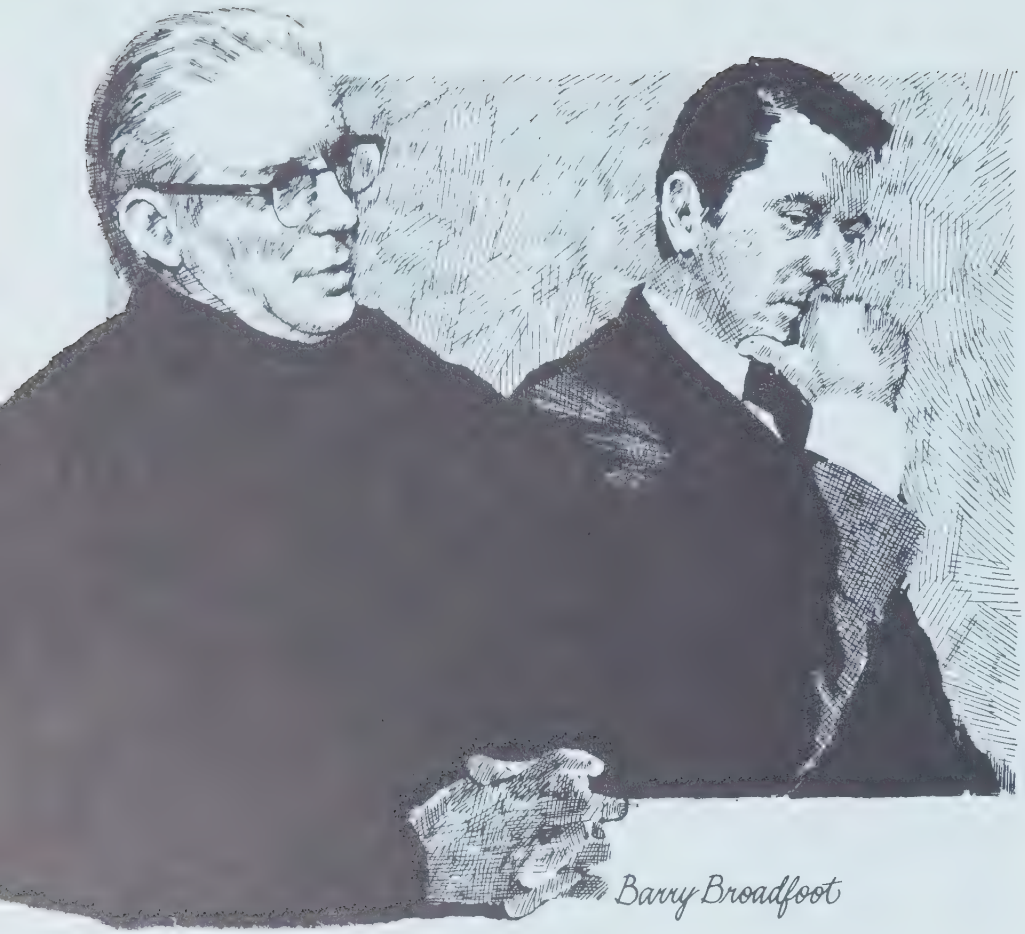
Studs Terkel's books were best sellers in the United States for one very good reason: they were full of color. Terkel stepped out of the limelight and featured the colorful speech of a broad range of people.

Popular Canadian oral histories have followed the same pattern. Broadfoot's *Ten Lost Years* and Anderson's *Remembering the Farm* feature people's stories rather than editors' opinions. The editor selects the portion he wants, but he never sanitizes the storyteller's words.

Of course, some of the storytellers try to "watch their language" and sound impressive. But more often than not, their idiosyncracies and the speech habits of their generation, region and background are faithfully recorded and then transcribed and selected so the color is preserved.

These four ingredients — old-timers, new technology, a borrowed, successful technique and colorful speech — sound rather easy to assemble. And given the amazing success of Canada's first popularized oral history, it is not surprising that *Ten Lost Years* has been imitated.

The closest imitator of Broadfoot's initial success is Broadfoot himself.



He followed *Ten Lost Years* with *Six War Years: 1939-1945* and *The Pioneer Years: 1895-1914*. Both did well. Then he added an oral history with less popular appeal — a story that he felt should be told. *Years of Sorrow, Years of Shame* chronicled the internment of Japanese Canadians during World War II.

It seems unlikely, however, that Broadfoot will add a fifth oral history to the four already published by Doubleday. For now he has stowed away his tape recorders to write a weekly column for *The Nanaimo Free Press*.

Canada's other well-known oral historian, Allan Anderson, has published two oral histories so far and is currently wrapping up a third. *Remembering the Farm* (Macmillan, 1977) recorded the experiences of farmers and ranchers across the country; *Salt Water, Fresh Water* (Macmillan, 1979) collected the stories of fishermen and others who make their livings from Canada's oceans, lakes and rivers. Anderson's third oral history, due for publication in the fall of 1981, chronicles the risks and rewards of searching for oil under Canada's soil and waters.

Like Broadfoot, whom he freely credits with establishing oral history in Canada, Anderson emphasizes that the work behind oral history isn't as easy as it looks. It can be grueling, involving long days driving, interviewing, then transcribing the day's valuable pieces.

Another difficulty is that interviews don't always come easily. The interviewer must be able, says Anderson, "to sit down with people for two or three hours and know how to keep them so excited and so stimulated that they reach down into the well of their memories and bring up cold, clear water that has been down there for God knows how long."

Ironically, when Anderson is himself interviewed in his home in Tottenham, Ont., the interviewer hardly needs any skills at all. Anderson — the old pro — checks the tape recorder, anticipates questions and talks nonstop about his craft. He is a man of many metaphors, and they tumble forth as he explains his techniques. On the search for the right story: "It's a fishing expedition — you never know what big fish are lurking in silent pools." On the interviewer's pace: "You have to have that pot boiling all the damn time just as furiously as possible." Farm lore, water and wells seem to spill from his books into his enthusiastic explanations.

Actually, it's no wonder Anderson has these subjects on his mind. He is constantly sifting his material, testing possible organizations and plugging up the holes with additional interviews and material. He compares his work to putting together a jigsaw puzzle that can be assembled in many different ways.

Anderson's work on his latest book, provisionally entitled *Roughnecks, Mudmen and Rigs,* took him to Alberta last summer. He managed to get some funding for research and then employed his daughter, Pegeen, to assist as he coaxed stories about Leduc and other milestones from more than 60 oilmen.

By September these stories were starting to fall into place. But some pieces of the puzzle were still missing. Anderson needed more material on the industry's beginnings and on the oil fields of southwestern Ontario. So he phoned a number he had been given and arranged to meet W.A. Roliff at Roliff's home in Toronto.

Bill Roliff seemed an ideal person for an interview. His career as a geologist in the oil industry spanned five decades — from the 1920s until his retirement in 1969. With a doctorate in geology and experience managing Imperial Oil's eastern division, he appeared to have just the credentials Anderson was looking for.

As a result, another Anderson interview begins. Anderson arrives in high spirits, Sony in hand. Roliff seems dubious about the whole venture and asks some puzzled questions about why Anderson is there. A couple of Calgary oilmen, Anderson jokes, "pointed a great fat finger at you."

Roliff is modest. "Well, I dunno what I can tell you ..." he starts. Then he adds discouragingly, "The fellows who look for oil don't talk." But both Roliff and Anderson know such comments are said with tongue in cheek. Roliff isn't a frightened

quarry, running from the interviewer; he's enjoying Anderson's hunt and is just feigning some evasive action.

A few minutes later the interview is under way. The cassette recorder sits on Anderson's two previous oral histories, bringing the microphone closer to Roliff's soft voice and reminding him of Anderson's credentials. The conversation starts slowly, with the halting, incomplete answers that Anderson knows he cannot use. Anderson leans into the interview and tries a new tack: "What I'd like to get from you is a word picture of what southwestern Ontario was like in 1925." Roliff starts to relax, and the oral history — dredged up from over half a century ago — starts to flow.

The techniques used by Allan Anderson and pioneered by Barry Broadfoot have been used many times over during the last ten years. They have produced archival material, local histories, radio programs, television series and plays. Many provide valuable and entertaining records of aspects of Canadian life that might otherwise go unrecorded.

The radio, television and stage uses of oral history have proven particularly effective. "Voice of the Pioneer," a regular feature hosted by Bill McNeil on CBC Radio, crackles with the energy and pride of one of Canada's Prairie settlers, Lorne Saunders. A TVOntario history, *Villages et visages de l'Ontario français,* comes alive with the voices of 250 men and women, average age 70. Similarly, theatrical productions of *Ten Lost Years* and *The Mac Paps* (based on the reminiscences of Canadian veterans of the Spanish Civil War) resonate with firsthand accounts which indeed seem more compelling than fiction.

Firsthand accounts such as these have also made their way into high schools, colleges and universities across the country. At Seneca College in King City, Ont., Maureen Kennedy Baker teaches — or more accurately, organizes — a course she calls Personal Histories. Each week she brings to a two-hour session a guest teacher: an older person with the wisdom and experience that Kennedy Baker feels too often go ignored in our society. The guests' personal histories expose students to a mixture of philosophy, history and just plain experience.

With oral history making inroads into Canadian publishing, theatre, media and teaching, many observers are now assessing its strengths and weaknesses.

Academic historians are, as can be expected, cautious. Michiel Horn, an associate professor of history at Glendon College, York University in Toronto, recognizes three uses for oral history: adding color to accounts that could otherwise be "bloodless"; clarifying contentious issues in the historical record; and providing raw material for future historians.

Yet Horn feels uneasy about popularizers. Broadfoot, he says, is not really a historian; he doesn't seem to be interested in substantiating the stories told to him. Horn concludes his criticism with a pet phrase, "Nostalgia has a rotten memory." He grins at this last pronouncement — one which he has used in previous battles over popular oral history.

Both Anderson and Broadfoot rise to the battle. The academics are jealous of our popularity and sales, they charge. Broadfoot suggests that the academics he met at an oral history conference near Montreal were preoccupied with grants. And Anderson adds his definition of history to counter Horn's worry about objective, cross-checked records. "History," he says, "is what we think it is. That's all it can be, since every age tends to interpret history differently."

But this is really a war of words fought with occasionally trumped-up insults and taunts. Beneath it all both the popularizers and the academic historians recognize that the past decade — with its renewed interest in a vanishing past, economic calamity, and the events and struggles that formed this country — has produced a special, unprecedented record.

The reminiscences of ordinary people can never replace the traditional historical record of elections, acts and treaties. Nor should they. Instead these stories can, as Anderson puts it, "touch bedrock" in a way that histories of politicians and policies cannot.

Thus, oral histories of oilmen and coureurs de bois, of migrants and settlers, of soldiers and survivors give us a different link with our past. And as generations with valuable experiences and memories die off, we can be thankful that we have forged this link just in the nick of time. □

MENNONITES

The old ways are forever

BY GERALD LEVITCH

PHOTOGRAPHS BY ALAIN MASSON

The one-room schoolhouse stands inconspicuously just off a rural road in Heidelberg, Ont. The white frame building gives no hint of its purpose, no external signs, such as slides or swings or monkey bars. Nor are there any bicycles parked under the shading trees. Indeed the only evidence that there are children inside is a clutter of tiny shoes on the doorstep. The shoes are plain, old-fashioned and sensible leather, with no bright colors or frills.

But possibly what seems oddest of all to the outsider is that the one-room schoolhouse is new — not old and run-down. And its occupants are there by choice, not for lack of opportunity.

The youngsters inside are children of Old Order Mennonite farmers, and the Heidelberg Parochial School is the product of a way of life that's inspired by religious idealism, nourished by religious discipline and very nearly self-sufficient.

Old Order Mennonites have been an object of growing interest in recent years because of their 19th century style of dress, their buggies and their stubborn refusal to accept the universal creature comforts of 20th century technology. The impression made by Old Order Mennonites is so vivid that to the outsider what is in fact a minority within the larger fold of the Mennonite community has come to stand for the whole. In fact, in Ontario there are 15 different Mennonite groups, including several distinct kinds of Old Order Mennonites and various different progressive groups, which each represent some alteration of the basic Mennonite social and cultural fabric. But the cloth of Mennonite doctrine itself remains intact, and no splinter group tears so far away as to rent that cloth.

These divisions are mostly the product of the last hundred years, and the history of the Mennonites in Ontario goes back far beyond that, beginning in the late 18th century when, shortly after the American Revolution, Pennsylvania Dutch farmers began to resettle in what is now Waterloo County. They had first arrived in Pennsylvania from Switzerland and South Central Germany in the 17th century, invited by William Penn himself, a Quaker who shared their pacifism and sought to give them refuge as fellow victims of religious persecution.

The causes of that persecution date back to the origins of the Mennonites in the Anabaptist movement of the 16th century. Even as the Protestant Reformation was taking hold in Germany, a group of young Swiss intellectuals were turning to Biblical fundamentalism, seeking a church free from state control and questioning the validity of infant baptism, pointing instead to the early church fathers, whose adult baptism was a matter of individual choice. This doctrine of Anabaptism was renounced as heresy by both the Catholic Church and the Protestant Lutherans. As a result the early Swiss founders were martyred, their leadership filled by, among others, a former Catholic priest from Holland named Menno Simons, who joined the movement in 1536. While neither the founder nor the sole leader, Simons' prolific writings and moderate leadership helped unify the Anabaptists, many of whom became known as Mennonites.

Even as the movement gained followers among the rural peasants of Switzerland and south Germany, it lost thousands at the hands of persecutors; most were forced to flee for their lives. Some escaped as far away as Russia, and some of their descendants eventually immigrated to Ontario in the 1920s. The earliest Mennonites to come to Pennsylvania, beginning in 1683, became known as Pennsylvania Dutch, even though they were mostly Swiss-Germans speaking a German dialect, not Flemish or Dutch.

Their linguistic difference from the rest of the settlers was the first crucial element of what was to become a distinctive and coherent culture, linked to church tradition and critical to the survival of the Mennonites as a group. Indeed, in recent years some Old Order church leaders have been criticized for being more concerned with maintaining tradition than preaching salvation. That criticism — even as voiced by fellow Mennonites — underlines the church's role in preserving and defining the distinctive cultural aspects of the Old Order Mennonites. And it reinforces the observations of other Mennonite commentators who distinguish the Mennonites from other Christian sects, such as Methodists or Presbyterians, because they live apart in a society and culture peculiar to themselves. Of course, the Old Order church leaders did not themselves create this culture; they merely preserve it. Like any other cultural phenomenon, it was born

quite naturally of historical necessity and geographic accidents.

While the conservative Old Order Mennonites have little trade with "high culture" as we might understand it, they have evolved their own forms of expression. It's only human nature to wish to do certain things well, even if pride in worldly accomplishment is deplored by the faithful. But building a better barn is not false pride, nor laying a good table or planting a garden. However, what sometimes begins as a practical goal, such as the making of quilts out of saved scraps of cloth, becomes an art in spite of itself. And no Old Order church leader has ever faulted a Mennonite farmwife for making a better quilt or baking a tastier shoofly pie.

It could be argued that food is just as important culturally as poetry, if not more so. And the Old Order Mennonites eat well and heartily. Growing their own meats, vegetables and fruits, they've developed a unique cuisine that's rich in old German and Swiss dishes and enhanced with New World ingredients and a few tricks they may have picked up from their ancestors' friendly encounters with the Indians. Modern Mennonite cookbooks detail the culinary pleasures of Schnitz un Knepp (dried apples and dumplings with cured ham), Drepsel soup and Pawnhaas (a kind of pork pancake). There are also the ubiquitous pies, without which no meal is considered complete, and countless varieties of preserves, pickles, relishes, smoked meats and sausages, as well as cheeses, which line the pantries and fill the cellars for a long winter.

To the outsider, the visible differences of clothing and transportation are all cultural and social, but they have an underlying religious significance. The Old Order Mennonites sometimes seem preoccupied with preserving appearances, but their reasons are based on doctrinal interpretation. And even among Mennonites themselves (even various Old Order Mennonites), the interpretations are subject to dispute. For a people so historically cohesive, the political security of the New World in turn came to threaten their social integrity and cultural order.

As a result of differences within the Ontario Mennonite Conference, a body dating back to 1820, the Old Order Mennonite group was formed in 1889. The issues that brought about its formation included evening services, liberalization of dress regulations, and Sunday School (potentially offensive because it had the effect of removing responsibility for Christian instruction from the home). It was at this time that a distinctive dress code was adopted and frozen. Thus, the clothing of Old Order Mennonites represents a late 19th century version of "dressing plain."

As both religious and social nonconformists, Mennonites throughout their history have renounced worldly vanities as a symbolic gesture. For example, mustaches had long been associated with the military, and these were consequently forbidden. Collars and lapels were a stylish excess of cloth that likewise flaunted the austere edicts of "plain dress."

But even so, the finer points seem almost incomprehensible to the outsider. Why is a watch acceptable in the pocket but not on the wrist? Why is a phone in the house unacceptable, while using a pay phone or keeping a phone at work goes unremarked?

Some question these traditions, and those who disagree sometimes part company with neighbors or even families. Dave Brubacher is the youth minister at the St. Jacobs (Ontario) Mennonite Church. As he recalls, "My grandfather was a farmer and drove a horse and buggy. But on my mother's side of the family, due to a split that occurred in the forties, the father drove a car. My father was never a farmer; he worked in the feed-milling industry, and he quit driving the buggy when he was courting my mother." But the Brubacher car was still painted black, while now Dave's own car is pastel-colored, and he wears a mustache, casual sports clothes and a digital wristwatch. Within two generations the Brubachers have moved from one of the more conservative Old Order groups to being the most progressive of contemporary Mennonites.

This is the process of assimilation that Old Order Mennonites most dread. Because they identify social and cultural assimilation with religious assimilation and the eventual loss of faith, they stubbornly cling to the old ways, even as time and social temptation force some compromises.

The question of transportation vividly illustrates this problem, and it's even possible to distinguish one Mennonite congregation from another by what they travel in. The most

conservative Old Order groups use metal-rim buggy wheels, while a slightly more progressive group rides in rubber-rim buggies. One congregation allows cars, as long as they're painted black; when a member of that congregation is ordained, he must immediately paint the chrome bumpers of his car black. As Brubacher explains, this sets an example to the congregation and furthers the principle of nonconformity. "My mother's uncle was ordained into the ministry (by lot, as is the Old Order Mennonite custom) 10 years ago. Within a week of the ordination he had his car painted black — not because anybody told him he had to, but because he knew that was what was expected of him."

Despite the history of divisions and the superficial vagaries of dress and life-styles, the various Mennonite groups coexist amicably, having more in common doctrinally than their visible cultural differences might suggest. All of them still abide by the principles of the Dordrecht Confession of Faith, adopted in 1632. And no matter how they travel to market, the principles of pacifism and nonresistance are still intact.

The St. Jacobs Mennonite Church is representative of the relatively progressive Ontario Mennonite Conference, yet it is still quite austere in appearance, with plain wooden pews and an undecorated interior. An upright piano stands in a corner; while its presence marks a difference between progressive and Old Order groups, it is nonetheless used sparingly, for preludes and postludes rather than to accompany singing.

If frills in the church are frowned upon, then higher education has long posed the question of learning for purely pragmatic purposes versus learning for its own sake. For Old Order Mennonites education ends at the age of 14, in Grade 8. The Old Order groups do not oppose formal education, but they do object to many of the directions and pursuits of modern education. On principle they seem to distrust a superfluity of education; reading, writing and arithmetic — the basic skills to run a farm and conduct business — are enough.

In a society that regards movies as corrupting, radio and television go unheard and unseen and reading matter itself tends to be relegated to a basic minimum in the average Old Order household. The bookshelf might contain a copy of the Bible, the *Martyrs' Mirror* (a 17th century Dutch compendium of Christian martyrdom), and a hymnal, but precious little secular literature such as novels or poetry.

Mathias Martin, a Mennonite harnessmaker in Hawkesville, Ont., is something of a local character, and he readily relinquishes his workbench to chat with strangers. His shop is even on the itinerary of the local chamber of commerce's guided tour. The latter is tactfully promoted in a brochure at the Meetingplace information centre in St. Jacobs. And so in spite of self-imposed isolation, the Mennonites have almost become a tourist attraction. The best-known local feature is the Kitchener farmers' market, which offers a common ground for Old Order Mennonites and fashionable city folk to mingle. Meanwhile, the Meetingplace uses films, audiovisual displays, a cheery farmhouse kitchen and a walk-in model of one of the Swiss caves that housed the 16th century Mennonite fugitives to tell the Mennonite story to an attentive audience of interested visitors.

It's all done with restraint and good taste, and there's not a hint of commercial exploitation. The Old Order Mennonites have no objections to letting people know who they are and why they live the way they do. After all, the Mennonites have proved that a society can practice cultural separatism and still be good neighbors with the surrounding community. And most remarkably, their separatism from the norm both endures and prospers, even while it offers the possibilities of various degrees of assimilation for its dissenters. All this is accomplished so peaceably that "the quiet in the land," as the Old Order regard themselves, might be invisible, except for the clop-clop and sizzle of a metal-rimmed buggy on a country road. Or the uncanny sight of an Old Order mother and daughter strolling down the main street of Elmira, juxtaposed with the town women wearing halter tops and shorts. If they feel any self-consciousness, it's well under control. And if it weren't against their church teachings, they might almost appear proud. □

Complimentary study notes based on this article are available by writing to: Review Study Notes, Imperial Oil Limited, 111 St. Clair Ave. W., Room 410C, Toronto, Ont. M5W 1K3

The last time I saw summer

BY DICK BROWN

ILLUSTRATIONS BY HUNTLEY BROWN

THE rain came down all night and soaked everything. It soaked the tent and the firewood and a couple of jackets and some towels we'd left hanging from the branch of an old, dead birch. We'd put our shoes and a box of groceries beneath the big camp table, but a stream of water had flooded around them and they were soaked. We were up early to catch the ferry from Saint John to Digby, and when we crawled out of the tent, the rain was still streaming down. In a moment we were all soaked, too.

There were five of us — my wife and I and our three children, the youngest seven and the oldest 12 — and we all pitched in and worked as fast as we could, but it still took three-quarters of an hour to get the tent down and load it, along with our soggy belong-

ings, into the car. When we finally pulled away from the camp, we were drenched, chilled, tired, hungry, angry with one another — and it looked as though we'd miss the ferry.

Looking back over the past 10 years of holidays, that day stands out as the worst — but it also sticks in my mind as one of the very best days. Most importantly, it illustrates a couple of truths about holidays that more of us ought to think about when we go out crisscrossing the country and trying to get a look at the Peace Tower or Peggy's Cove or Lake Louise.

The first truth is that the highlights of holidays — the Peace Towers and the Peggy's Coves — are not true highlights at all. The things that matter, the points we'll remember for years to come, are the little bits and pieces of the traveling day, the discoveries and adversities and the minor triumphs. Learning that every hotel in Quebec City is jammed, then winding up in a little rooming house that gives you the best rooms of the entire holiday and at the lowest prices. Losing your way in Calgary and coming across a little drive-in that makes the best hamburgers in the whole country. Getting so hot on the highway heading across Manitoba that you're sure you'll die, then finding a picnic ground beside a deep, cool swimming hole.

The second truth about holidays (which is closely related to the first truth) is that the most enjoyable moments come in the course of overcoming some problem.

Miserable is the best word to describe our situation that morning as we drove the dozen or so kilometres to the ferry dock in Saint John. It was four years ago, but I still remember our utter despondency, edging through a thick, oozy fog along a slippery highway. Cars seemed to pop out of the muck right in front of us, and we had at least three dangerously close calls.

But we reached the ferry in time — and wished that we hadn't. The stormy crossing took two and a half hours, and my wife and two of our three children were sick. Then, when we got off at Digby, we began the 240-kilometre drive to Halifax. I had to be there that night, because I was working on a magazine article and I had an interview in the city first thing the following morning. We were so tired that we could barely keep awake. At lunch, which was a culinary disaster, I fell asleep against the side of the booth in the little restaurant.

We were about 80 kilometres out of

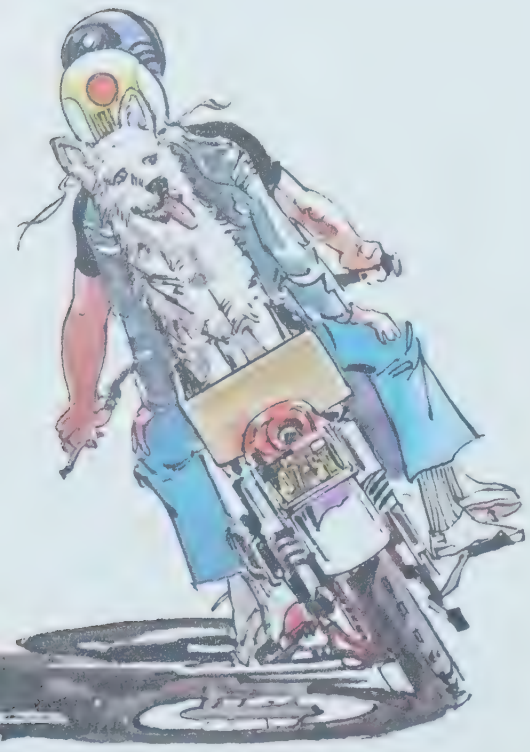
Halifax when the change began.

First of all the weather cleared. One moment we were driving through the downpour that had been pelting us all day, the next moment we were in a gentle drizzle, and a minute after that, a bright, afternoon sun burst out, and the highway suddenly was dry. The orchards of the Annapolis Valley sparkled, and a guy on a tractor waved at us from the shoulder of the road. Our spirits began to perk up.

The second thing that cheered us was that we were nearing the end of the day's journey and we were looking forward to the luxury of baths and soft beds and a good dinner — all the things we'd missed during the past four days of camping. We picked our way through the streets until we reached a downtown hotel, where we inquired about rooms.

Down went our spirits. The desk clerk told the fellow ahead of us that he was sorry; not only was this particular hotel full, but he couldn't think of a single hotel anywhere in the city that might have a room. There was a convention and .... The fellow ahead of us left — and just at that moment, the phone rang. A cancellation. A pair of adjoining rooms. Exactly what we wanted. Away up went the spirits.

We were so hungry that we left our bags in the car and headed for a restaurant that the room clerk recommended. It looked sort of shoddy, but it turned out to be absolutely great. Wonderful food. Friendly people. Inexpensive. We all had spaghetti, and the sauce was thick and rich, the bread was fresh, and there was plenty of butter.



We went back to the hotel and wallowed in the rooms. They had thick shag carpets, and the TVs worked, and the showers were hot. My wife and I had bought some magazines, so we lay back on the beds to read for a bit — and dropped right off. I woke up about 3 a.m. and had to get up to turn off the hissing TVs in both rooms. My family looked as though they'd been zapped by some ray gun, dropping in their tracks. My wife still wore her glasses; they were askew across her nose. The three children hadn't even made it under the covers; two were sprawled across beds, and my youngest son was asleep in a chair. On every face there was a smile.

We saw Citadel Hill the next day, but my kids barely remember it. Halifax will always mean thick shag rugs and gushing showers and sleep at last, in real beds — they'll remember the luxury because it followed a dose of misery.

In Prince Edward Island they saw the room where Canada's leaders met to discuss Confederation, but alas, they couldn't tell you today what it looks like. On the other hand, they can still give a fairly good imitation of the way the people in the next cottage talked; they were from Boston, and they used to say "waff" for wharf.

My kids recall the day we went digging for clams because it was another one of those small holiday triumphs: adversity overcome by effort. Everybody in P.E.I. seemed to know a good place to dig for clams, but every spot we located turned out to be either inaccessible or dug out. We'd heard, naturally, about how clams spit water up through the sand in tell-tale spouts. We kept looking . . . and looking. No spouts. No clams. Finally we gave up and were heading back to our cottage, when we came across a couple of girls on bikes and we couldn't help but ask, one more time. And they knew: Clams? Sure. In the beach half a kilometre down that road.

And there they were. Squirting like crazy. We got about four dozen, and they ended up as clam chowder. It was delicious, served with hot bread and capped with homemade blueberry pie, both from a farmhouse nearby. I asked my daughter just the other day if she could describe Anne of Green Gables' house near Cavendish in P.E.I. (we visited it twice), and I found she'd forgotten most of it. But she still recalls the white farmhouse down the road from our cottage, the one with the big yellow shutter that opens up so the woman can sell you those hot loaves of bread, and pies and cakes and muffins, too. "I even remember when the bread used to be ready," my daughter added. "Eleven-thirty. Just in time for lunch."

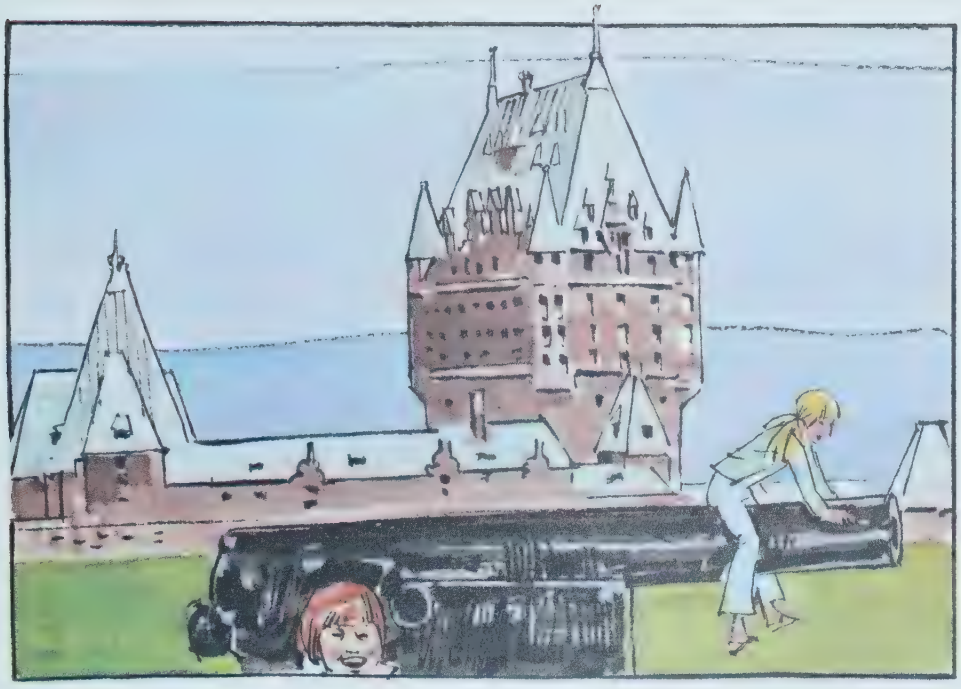
Right. And you'd be amazed at how well they remember the Cabot Trail. Not the splendor of the scenery, with the extravagant vistas of cliffs shooting up from the ocean; not the great road that winds and soars and dips. They remember the couple on the motorcycle (it had a Manitoba licence) who had a flat wooden box attached to their bike, above the rear wheel, and in the box was a large dog, sitting there with a certain easy nonchalance, leaning casually into the turns.

They recall the models of the sailing ships at Neils Harbour and the size of the chilly waves that rolled onto the beach at the campsite at Ingonish. There's nearly always something to make campsites stick in the mind. The park at Montmagny, Que., on the south shore of the St. Lawrence, is memorable for many reasons. The one that stands out is the sinister-looking loner on the motorcycle.

He rolled into the camp late, about 7:30 p.m., and his big bulb of a safety helmet was all black, and its visor was tinted darkly. We watched furtively as he took off his helmet to show a stubble-covered face with a deep scar along the edge of his jaw. He removed a green canvas pack from the back of his bike, placed it on the camp table, removed a pot, attached its detachable handle, and filled it with water at a nearby tap. He lit a fire and put the pot over it, then he went to work, setting up his tent. He was a marvel of precision and organization.

Then he set the table for dinner, laying out a spoon, a fork, a large hunting knife, which he slipped from its leather case, and a tin mug (the kind you see in old movies about prison riots). He did everything so quickly and exactly, and he got so much out of that small pack — and he still had something else in it.

He turned and faced our tent, and he pointed at my younger son. Then



he beckoned. My son was terrified, and my wife and I weren't sure how to handle the situation. The loner beckoned again, and when my son went over to him, the fellow reached into the pack and pulled out three chocolate bars. My son scurried back to our tent, and the motorcycle rider beamed at my wife and me — and he gave us the peace sign.

The campsite at Montmagny is also an important holiday memory because it's where we pitched a tent for the first time. It was raining when we arrived at the camp — not a downpour but an oppressive drizzle that doused us thoroughly because we took so long putting up the tent. It took us about an hour and a half, but in the end everything went together just so.

After dinner we hung a couple of electric torches in the tent, and we got the heater going and climbed into our sleeping bags and listened to our radio pull in all sorts of strange stations. And we went over every little step that we'd taken to get our tent up. The following night, and every night after that, we had everything shipshape in less than 15 minutes.

We saw the Golden Boy atop the Manitoba Legislature, but my kids have a much more vivid picture of the province. They remember the car trouble, an overheating engine that plagued us for a couple of days and that no garage could fix. People kept telling us that some engines just overheat. Then, near Portage la Prairie, we stopped at a service station where they really cared. The fellow said, sure, he could fix things. And his wife said we ought to let her make us a sandwich while we waited. And he did fix the car. And she did make us some chicken sandwiches. When my kids see a licence plate today with that slogan, "Friendly Manitoba," they say, "Remember the people at the garage?" Indeed I do.

Our family remembers the mountains of British Columbia, but ask our kids about Vancouver and you'll hear not a word about the beauty of the peaks that surround the city. Instead they'll list for you every single item you can order from room service at one of the downtown hotels. They know because all three of them caught some bug in Vancouver, and they had to spend two days in bed in the hotel. While their mother and father took in Stanley Park and Bloedel Conservatory, the kids hung in there on chocolate sundaes. My daughter also remembers Vancouver for Nancy Drew books — she received three of them to keep her occupied at the hotel — and the boys remember it as a city of Dinky Toy cars.

Alberta is the place where my older son lost his jackknife. Saskatchewan is the place where my younger son found it, under the seat of the car. One piece of Canadian history does remain in the minds of my kids: the row of big, high old cannons in Quebec City that point out over the St. Lawrence River. The reason they made such an impression is that my daughter climbed up on one and couldn't get down. We eased her off it in tears, and the boys were delighted. We'll all remember those cannons, forever.

We remember New Brunswick for the beaver expedition. About a dozen campers, accompanied by a student guide, went off in the woods one evening and wound up, after a walk of about half a kilometre, at a long, still pond backed up by a beaver dam and containing a beavers' home. The guide said that if everybody was quiet, a beaver would come out. We stood there for about 20 minutes, then fled to escape the mosquitoes. There were no beavers.

We remember Saint John because there's a restaurant there that agreed — quite cheerfully — to serve my boys tomato soup for breakfast, and there's a little shack of a place that stands out as a reminder of Charlottetown; that shack sold us the best fried clams we ever tasted. And Peggy's Cove — who could forget the place where my son Richard sprained his ankle so badly that we thought it was broken.

Naturally there are sweet, easygoing memories, too. "I like to remember driving when it was just getting dark," my daughter says, "and watching the blackness of the hills against the sky. And trying to count the stripes on the road behind the car. And suntan lotion .... I remember the smell of suntan lotion."

"The thing I remember," says her younger brother, "is when you'd give 25 cents to the first person who saw the ocean or the first person who saw the sign at the Nova Scotia border. You said you'd give five dollars if anybody saw a licence plate from Hawaii."

"Do you remember the Peace Tower in Ottawa?" I ask.

"Sure," my younger son replies. "Ottawa is where we got those swim flippers."

The best time for holiday memories is in the middle of winter. One day last January, when there was a bit of a chill in the house, my wife reached into the back of the hall closet and brought out the old, beaten-up jacket she wears in the summers. She put it on and shoved her hands into the pockets, and her face lit up. She drew out her hands, opened them, and there it was — sand. We looked at each other, and in that moment before we laughed, I swear we heard the ocean. □

In Closing

The other evening, just past dark,while I was alone in the house listening to one of those damp winds that always come at this time of year, I turned on the radio in my study and picked up a faraway station where they were talking about friendship, how it's on the way out because nobody bothers any more. I began to think I should call them long distance to tell them about the Bellettre Club in Toronto, a group of men who, more than 50 years ago, began a club that's been going strong ever since, doing a lot of interesting things, the most interesting of which is keeping up their friendships with each other through the good and bad times for more than half a century.

"We started as teenagers," one of the very first members, James Grand, has said, "and are now what we would have considered old men at that time. I doubt if any organization we belong to stands so high in our esteem. And the reason is friendship."

A while ago I phoned Grand, who became the head of his well-known family firm, Grand & Toy, the stationers, and I asked if I might spend some time with him — especially since he is the club historian as well as an original member — to hear about the club. Not just how it began but how it managed to survive so many years, even through the war, based so much on something so intangible as friendship.

Grand is a big man, with large, cheerful eyes, and when he took me to his study and sat me down amid all the folders and photos of the Bellettre Club's past he seemed a man ready to talk of a lifelong love, and also a man who, as he looked at me, might well have regarded me as a bit of an oddity, a writer hoping to have something revealed to him — the source of friendship — that is indefinable, just as it is priceless.

"It was in the autumn of 1930," he said, "and a number of us — four or five, I guess — were members of a Sunday school class in a church here in Toronto, and the time came when we were old enough to move up from Sunday school to what used to be called the Young Men's Bible Class. Well, the leader, whose name was Jim Plaxton, got the idea that we might form a literary club, and he suggested holding a meeting to discuss the formation of a club. Seven boys turned up. A sample constitution was read, and we were under way as the Rosedale Young Men's Literary Club. This was changed a couple of years later to the Bellettre Club, whose objective, stated in the constitution, has remained to this day: 'the fostering of friendship among its members, the mutual improvement of its members in literary knowledge, public speaking and debate.' " From the desk behind him, Grand picked up the book containing the minutes of that first meeting on October 22, 1930, signed by himself as secretary. The last sentence reveals something of the rather serious teenage boys, some just past their 15th birthday, who gathered that evening: "After the business was finished the meeting adjourned to the upstairs room, where there was an impromptu debate contest."

Since lasting friendship is the first

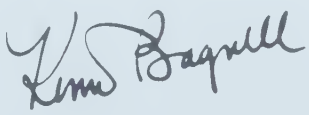
purpose of the club, it has always been a bit selective in admitting members, though only in order to keep things compatible. Thus, even in its peak years of membership, in the late thirties, there were only 25. In those days and later, a member could invite a visitor to a meeting, and at the next session (they've been held every two weeks except during the summer) the rest of the members could, by unanimous consent, invite him to join. "It is somewhat difficult," says Grand, "to become a member of the Bellettre Club, but after becoming a member it is vastly more difficult, in fact almost impossible, to resign." Now, after 50 years, the club membership has settled at about 20, some having moved, some having died. But only two remain of that original group that met in October 1930 — James Grand himself and Lees Owram, a former company president now retired in Aurora, Ont. When Grand talks about what the club "has accomplished" he says, quite modestly I'm sure, that it is very little if you mean credits that can be listed on the wall in the form of plaques or trophies, but in terms of the things immeasurable the accomplishments are of "inestimable value." He means friendships that have accompanied boys into youth, youth into manhood and manhood into old age. Here, he says, is a group photo taken when they were in their teens, another photo of them as young men on the way up, another of them when they were in mid-life and now, finally, the most recent, of a group made smaller by the years, men with silver hair and the dignity of age.

Still, deep friendships don't deepen in thin air. They require — almost the way a vine requires a trellis — something to grow upon. In the case of the Bellettre Club that hasn't been bowling or squash or euchre, but the play of the mind and the wit, mostly through visiting speakers or debates between their own members. On the evening of February 26, 1936, Sir Frederick Banting was their guest, speaking on Russia. But an even more provocative and historic meeting must have been the one on February 9, 1939, when the club (joined for the evening by members of a companion group called the Cameron Club), by then young men on their way into business and finance, invited Tim Buck, the fiery spokesman for communism in Canada, to give them a lecture. The minutes of that meeting leave much to imagine: "The President called on Mr. Tim Buck, the secretary of the Communist Party in Canada, who addressed the meeting for an hour and a half on the principles of communism as described by Karl Marx....There followed a period of discussion in which Mr. Buck took on all comers for an hour ...."

Perhaps, however, even that evening wasn't as filled with sparks as the one held a few years earlier, when the members staged a debate on a resolution that must have set off a controversy at home if not in the club: "Resolved that women have attained too prominent a position in the present social and economic system." Then, of course, there was that night in the thirties when, while still youngsters, they held a debate on free trade in the British Empire. "There was a mix-up," say the minutes of that night, "and both speakers argued for the same side. All the members joined in on the subject, and after a long discussion the affirmative won."

I think we ought to be grateful for groups like the Bellettre Club. A few years ago, when time and age began to thin the ranks of the club, the members decreed that their president should be authorized to acquire a bottle of vintage wine, setting it aside for that day — a year or many years hence — when only two members are still alive. As it happened, the president chose a bottle of brandy circa 1900. Then, after serious deliberation along parliamentary lines, the members decided that it should be left unopened until (a) the first meeting in the autumn of the year 2000, when the club will be 70 years old and the brandy 100 years old, or (b) before that year, if the day comes when only two members remain.

Whenever the evening comes and the men of the Bellettre Club raise their glasses, they will do it, I'm sure, with rare and special gratitude for what the club has meant to their lives. Still, I like to think that, in a way they may not realize, their club has meant something for the rest of us. For in keeping their friendships with each other so deep and so long, they have helped to keep friendship for us all. □



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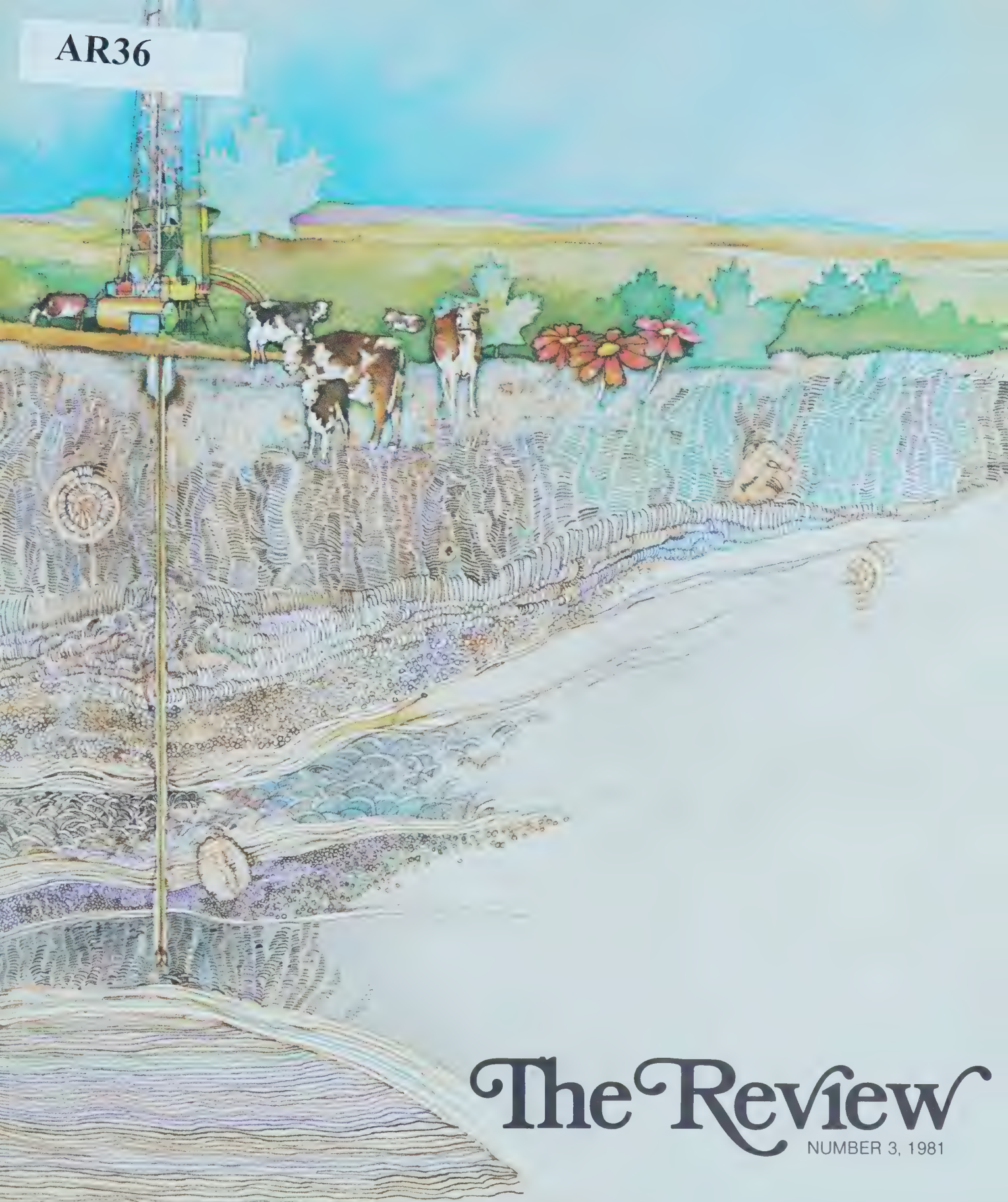


The Review

NUMBER 3, 1981

OIL AND THE NURTURING OF CANADA'S FUTURE

MADE IN CANADA

Imperial shops at home

BY JAMES DINGWALL

It was a few days before Christmas, and Aubrey Peterson, manager of Imperial Oil's purchasing department, was checking over his shopping list. Columns of industrial commodities were listed in ranking order and cross-referenced against the various Imperial operations: refining, exploration and production, chemicals. The report showed what items would be needed where in the company and, more importantly, when they would need to be delivered.

Clearly it was a list that had little to do with the season at hand. But it had much to do with Imperial's investment in the energy future of Canada and, curiously enough, in the welfare of thousands of Canadian manufacturers. Peterson's "shopping list," as he calls it, was the first draft of a detailed summary of commodities the company needs to bring more than $20-billion worth of energy-related projects on stream in the 1980s.

At the hub of that spending is an Imperial policy that reaches deep into Canada's manufacturing life. Last year Imperial purchased $1.3 billion of materials and services; Peterson expects that amount to rise steadily to $2 billion by 1985. Almost half of that money is for materials and finds its way directly to small and large manufacturers across the country.

At Imperial, says Peterson, about 85 to 90 percent of the manufactured goods purchased by the company carry a predominant Canadian content, although he admits that in some cases there is no way to determine the exact content because the company's suppliers don't necessarily make a detailed study of where their raw materials and components come from. Canadian content would be even higher, except that some commodities needed in the company's operations are not available in Canada.

Assessing what is truly "Canadian-made" is no easy task. Still, it's important and, in some cases, required. For example, the federal Northern Pipeline Act, which governs the Alaska highway pipeline, affects the purchasing policies of companies working on that project. Moreover, many resource-rich provinces — Saskatchewan, British Columbia, Alberta and Newfoundland — are setting guidelines to encourage purchasing of goods and services within their boundaries. Clearly federal and provincial guidelines will only serve to put more pressure on companies to establish and monitor their Canadian or regional content.

All things being equal (quality, service and price), Imperial's purchasing policy is "to give preference to Canadian suppliers, contractors and consultants and to those conducting business in the province or area of the company's needs. Firms are further encouraged to manufacture these materials in Canada." It's a policy that has been in writing for at least 40 years and as a day-to-day principle has guided the company for longer still. "I never fail to be amazed at the intensity of this conviction across the company," says Peterson.

One day back in 1950 two Imperial men came calling on Bruce Nodwell, a partner in the Calgary-based firm of Nodwell Brothers Ltd. They wanted his little company to help design and build something called an "all-terrain vehicle." At that point the company was a major builder of mobile camps for Imperial's seismic crews. But it had no knowledge of this kind of off-

TOM McNEELY

the-road vehicle. "Nevertheless," says Nodwell, "Frank Spragins, Imperial's geophysical field supervisor out here at the time, was intrigued by the idea." And it didn't take long for Bruce Nodwell to become equally enthusiastic. Gerry Rempel was Spragins' partner, and as he remembers, "Frank figured that our geophysical crews could be working year round if we could only figure out how to travel over the muskeg."

Unfortunately, Nodwell's first prototype, completed in 1952, didn't work. The second effort and the third met with similar results. But in 1955 Imperial came through with a $2,000 grant to fit a 100-centimetre-wide track on the vehicle. "It doesn't sound like much now," concedes Nodwell, "but it was all we needed to tip the scale in our favor." The wider, more stable track, coupled with a unique steering mechanism, kept the vehicle from bogging down when it was maneuvered. The Nodwell vehicle proved its success first in Alaska and later in the northern fields of British Columbia, Alberta and the Northwest Territories.

By the mid-1960s Bruce Nodwell and his son, Jack, were working together in their new company, Foremost Development Ltd., making and selling a variety of all-terrain vehicles. In 1966 the Soviet minister of the oil industry was visiting Canada and mentioned his country's transportation problems in its frontier oil fields. His host, Imperial Oil, brought him around to see Jack. Two years later, Nodwell recalls, the company received its first order from Russia. Since then, he says, his firm, now called Canadian Foremost, has sold $40 million worth of its vehicles to the U.S.S.R., and it currently exports 75 percent of its products.

These days, Jack Nodwell is continuing to develop new equipment and technology for Canadian exploration. Canadian Foremost has designed a new hydraulic pumping unit that promises to be a significant breakthrough in heavy-oil recovery around Lloydminster, Alta. Canadian Foremost and Esso Resources Canada Limited, one of the companies currently testing the device, both hope the new pumping unit will be an economical solution to the recovery of sticky, black crude.

This type of relationship is by no means unusual. At Imperial a good proportion of the manufacturing orders sent out to suppliers involve original engineering and design work. And the effects ripple through the economy. In Canadian Foremost's case, 600 Canadian subcontractors and manufacturers contribute to the making of its vehicles. In the case of another company, Metal Craft Limited in St. John's, Nfld., work originally commissioned by Imperial's subsidiary, Esso Resources, has led Roy Lambe right into the thick of the oil and gas services business on the east coast.

Metal Craft had been doing regular repair work for Imperial's road tankers when, in 1978, Esso Resources approached Lambe to construct several mud platforms (six-metre-square partitioned basins used to catch bottom mud from the ocean floor) for its offshore drilling program along the Labrador coast. It was new work for his small metal-fabricating company, with 30 or so employees, but the job went well enough for Esso Resources to ask Lambe to devise a way to sandblast and apply a protective coating to the insides of 305,000 metres of casing pipe that had to be stored for the winter.

Lambe decided to attach a sandblasting device to the end of a long hose and drag it through the length of the pipe. Similarly, a revolving spray nozzle capable of coating the inside with rust preventative was employed to finish the task. According to Lambe, a job that might have cost as much as $400,000 finally cost the company not more than $200,000. Moreover, according to latest reports the casing is still out there and holding up.

The expertise that Metal Craft gained gave Lambe enough confidence and expertise to incorporate a new company, Atlantic Pipe Protection Ltd., capable of servicing and inspecting the casing pipe used by the other exploration companies. As drilling started up again off the Nova Scotia coast, Atlantic Pipe opened a branch in Dartmouth.

In addition, Lambe incorporated another company, Atlantic Oilfield Services Ltd., to supply the offshore oil drillers with goods and services, including an oil dispersant system that his company designed to contain oil spills. "We've got about 15 to 18 of them out right now," says Lambe. With 60 people now working for him, compared with the two-man shop he started with back in 1970, he is pleased with his success, due in part to Esso's decision to get a Newfoundland entrepreneur to build its mud platforms. "We always prefer," says Jock Lyons, manager of the company's western purchasing division, "to work with an established person in the community."

It's certainly not just the chance to help local entrepreneurs that prompts this type of approach. "It's just good business in many cases," says Lyons, citing Imperial's relationship with Pat Zowtuck, president of Galaxy Oilfield Service Ltd. in Edmonton. "We might order something for a drill head and suddenly hit a problem. One of our guys can phone Pat at 2 a.m., and he'll send us what we need within an hour." And that type of situation, says Lyons, happens all the time.

Zowtuck's company started up about 12 years ago and now does a booming business making Christmas trees — those fancifully configured wellhead valves that Imperial and the other oil companies use to cap an oilwell. Indeed, says Zowtuck, "We're pretty well the leaders in steam wellheads," which are used by Imperial at Cold Lake.

Unfortunately, adds Zowtuck as he talks about Cold Lake, "with that project delayed we're looking at a 40-percent decline in our activities." That means, he says, a loss in revenue of $2.5 million this year, against anticipated sales of $6 million.

That burden won't be carried by Galaxy alone. Like Imperial, this small manufacturer has a "buy Canadian" policy that takes the company to Welland and Simcoe, Ont., for instance, to buy steel-forged fittings and valves. As Imperial goes, so goes his own company, says Zowtuck, and, he might add, so go the profits of his suppliers in the East. "All this uncertainty is having a profound effect," he says, referring to the current federal-provincial dispute over oil taxation. "I predict a lot of our smaller companies will go by the wayside as a result."

For Aubrey Peterson, the current debate between the provinces and the federal government poses a special challenge. He must encourage Canadian manufacturers to gear up

for Imperial's increasing demand for manufactured items.

But will they? All Peterson can do is sadly nod his head listening to some possible objections: nothing but slow-growth economic forecasts from most major Canadian research institutes; high interest rates; an uncertain political climate as far as energy-related developments are concerned. All these factors make for a less than glowing climate within which to expand and gear up for the massive new projects that Imperial planners see developing in the next 10 years.

"Given a reasonably favorable investment climate, Imperial's needs are going to expand substantially," asserts Peterson, looking at the megaprojects the company will be involved with in the coming decade.

But it won't be just Imperial that will be looking for future sources of supply: energy-related expenditures for the coming decade are estimated to be in the hundreds of billions of dollars. Thus, Peterson and other Imperial executives would be less than candid if they didn't admit to fears of a supply problem in the near future. That's why the company has been moving on several fronts to bolster its efforts to nurture Canadian businesses across the country. "What we've done in the past is fine," says Peterson, "but it won't be good enough for the future." More effective ways of buying goods and services must be found. Where once the department confined itself to simply procuring the goods for other company divisions, today, says Peterson, "our role in materials management takes us right back to the idea or inception stages of corporate projects, with involvement in every stage of the development process."

That explains Peterson's "shopping list." From all points of the company, investment plans and capital spending forecasts are being translated by the purchasing department into materials and services. Armed with this information (and when you're looking down the road apiece, forecasting is an inexact science), Imperial buyers can sit down with manufacturers and suppliers to plan production requirements, not just six months away but possibly six years.

A crucial part of this whole operation is an ongoing communication with key manufacturers, matching their plans with those of Imperial. It's not surprising to discover that wherever possible this communication is already taking place.

Consider, for example, the recent announcement that the Algoma Steel Corporation, Limited, of Sault Ste. Marie, Ont., was building a $300-million seamless tube mill. It was a decision based in part "on encouraging Imperial forecasts of its activities," says Merlin McCracken, general manager of tubular and special products with the steel company. Says McCracken: "Aubrey Peterson gives us as much information as he can on Imperial's long-range plans, and we keep him informed about what we're doing."

Similarly, in Montreal Bill Norcott, vice-president of sales for Industrial Containers Ltd. and Arshinoff and Co., casually refers to the "Imperial installation." He means a $100,000 industrial washing machine that Arshinoff and Co. provided several years ago to clean the 45-gallon drums that the company uses to transport aviation fuel. "We didn't pursue them, they pursued us," he says.

What Peterson is calling for now is more dialogue right across the country between Imperial and those who are in business to supply it. In effect, Imperial will be telling suppliers what materials it will need, where and when. Provided with advance data, manufacturers can make their own plans, redirecting their existing facilities or expanding to accommodate the demands of the company.

In the light of current government trends to encourage Canadian content in the goods and services Imperial and other oil companies are buying, Peterson has been asking suppliers to start breaking out the percentage of Canadian content in their finished products. He wants to see a system that rigorously keeps book on the dollar value of Canadian labor and materials. It won't be easy, concedes Peterson. For one thing, some suppliers aren't used to keeping those kinds of records.

For another, setting an arbitrary percentage level of Canadian content might be misleading or unfair. "It's still largely a matter of definition," he says. Barry Beale, in his recently released book, *Energy and Industry*, commissioned by the Canadian Institute for Economic Policy, makes much the same argument:

"If, for example, a level is set at 70 percent and a product has only 60 percent defined Canadian content, what is the status of the product? It cannot be called Canadian, but at the same time, it is clearly not a foreign product." Still, defining and monitoring Canadian content is worth striving for, Beale concludes. It's one way of strengthening our manufacturing sector by giving it a piece of the spending on future energy development.

Peterson heartily agrees. But he points out that Imperial's policy is also prompted by its self-interest. The company is going to need an unprecedented amount of goods and services in the coming decade. A guaranteed Canadian source means quick delivery times, lower transportation costs and an assured source of supply.

By and large, what Peterson envisions is simply taking a good working relationship between Imperial and the many suppliers it deals with and making it better.

As Bruce Nodwell thinks back on the 30 years and more he has had contact with Imperial, he says: "The company puts a lot of effort into getting Canadians to do things. We wouldn't be in the all-terrain vehicle business if it weren't for Imperial."

And it's not necessarily what the company does, but what it sets in motion that counts to many manufacturers. Being involved with Imperial, says Norcott in Montreal, "allows us to flex our own muscles." The cash flow derived from regular, long-term work with the company is a necessary ingredient to help Industrial Containers expand into other areas of business that might not affect Imperial at all. In Longueuil, Que., Rodrique Pelletier, vice-president and sales manager for Drummond Welding and Steel Works Ltd., can cite a relationship with the company that dates back to 1946, building storage tanks and pressure vessels.

"When a new customer asks who we work for," says Pelletier, "we always give that company Imperial's name." And he adds with a laugh: "You give us 10 clients like that and we'll be happy." □

FREEMAN PATTERSON

LABORS OF LOVE

BY GERALD LEVITCH

If you look around and try to find something that's been made by hand, you'll find it's almost impossible today. Virtually everything we handle, wear, use, work with or play with is the product of machines and factories, mass production and assembly lines. We've reached a point in history where practically the only handmade objects left tend to fall into the realm of fine arts. In fact, we have to go to a museum to rediscover the kind of everyday craftsmanship that our grandfathers took for granted.

Of course, there's no denying the practical benefits of mass production and modern technology, which offer us a vast array of readily available consumer products at affordable prices. But we miss something, too. It's a sense of human involvement that's gone astray, a feeling of personal contact between consumer and manufacturer that's been irretrievably damaged. We no longer know who makes our furniture or our clothes, our appliances or our household tools. The multinational brand name has replaced the local craftsman, while "no-name" suppliers of proprietary brands take us even farther away from the original source of the goods.

And yet the honorable craftsman who still makes his products by hand isn't altogether lost; he's just become hard to find. In this country there are still a few practitioners of the old trades (and at least one unlikely new one) who take orders directly from customers they meet face-to-face and who make-to-measure ordinary functional objects with their own hands. The best-known of those goods — custom-tailored suits and handmade shoes — have now become luxuries. But that's not surprising. Anything made by hand takes longer to make and naturally costs more.

For example, you can buy a shotgun anywhere in Canada for less than $500, and it will dispatch rabbits just as effectively as a gun that Frank Malin can make for you that costs $10,000. The principal difference is that Frank Malin's shotgun is also a work of art, a collector's item and an investment. As well as being an excellent shotgun.

Excellence of the product is a necessary mark of a true craftsman. One frequently hears the complaint that excellence as a standard of workmanship has disappeared from contemporary life; but that has to be measured against the demand for excellence, which may also be diminishing. When that demand exists, though, the supply will be created and the craftsman's customers will find him, wherever he may live.

And that could be in Melbourne, Ont., where Frank Malin keeps his shop. Or it might be in High River, Alta., where the master silversmith and saddlemaker Jim Olson works with his son and daughter, fashioning his much prized silver buckles and making the occasional silver-inlaid parade saddle on demand.

Similarly, when the directors of the Kings Landing Historical Settlement wanted to build a full-scale reproduction of an 18-tonne, 1835 Saint John River wood-boat, they turned to Gerard Friolet, who lives in Bas Caraquet, N.B. As Darryl Butler of Kings Landing says, "Friolet can bend wood in mysterious ways." Nobody knows quite how he does it, but if you want it done, he's the man to do it.

In much the same way, university music departments discovered and sought the services of Toronto's Saul Wolfman. His handmade amplifiers and sound systems filled a need for products that weren't commercially

available. Wolfman built special equipment for a special purpose to specifications that were determined by unique conditions. And so he proved that vacuum tubes and transistors can be a craftsman's raw materials, as much as wood and steel, leather and silver.

But if there's one element that's common to every craftsman — no matter what his trade may be — it's a lengthy apprenticeship spread over many years, learning a skill, gaining experience and refining his knowledge. All of this takes time. In Frank Malin's case, his formal apprenticeship lasted seven years, as long as it takes to become a doctor. Born in Birmingham, home of England's gun industry, Malin left school at 15. "I was taken literally by the scruff of the neck and started work the following Monday." His father worked at BSA (British Small Arms), and he had arranged for Frank to begin his apprenticeship at Webley and Scott, a sporting arms firm. Did Frank have any choice in the matter of his future? "Nope," he replies laconically. He adds that when he asked his father why, he was told simply, "because that's the way things are." Frank's father had started working in the gun trade when he was 12 years old, and so had his father before him, well back into the Victorian era. Indeed, there were gunmakers in the last three generations of Frank's family and the last two generations of his wife's. Malin has lately arranged for his own son to go back to England for his apprenticeship, returning home afterward to join his father. Already, in anticipation, the sign over the Melbourne shop door reads: Frank E. Malin & Son, Gunmakers.

But now the fine gunmaking business in England is shrinking. One of the biggest reasons, Malin says, is the pay for apprentices. As recently as 1975, upon finishing his apprenticeship a young master gunmaker might expect to make $120 a week from one of the major English firms. But now, says Malin, "It's a pittance — $40 or $50 a week." As a result, fewer young men each year enter the trade; even Malin himself might have abandoned it if he hadn't discovered a substantial market for his skills in North America.

Frank visited Canada several times during the 1970s. Two of his brothers had already settled here and were prospering, so Frank decided to move his family to Canada in 1976.

The first couple of years were a bit rough. He worked at home, repairing a few guns and making at least one gun a year. "I didn't know if I wanted to continue in gunmaking in this country. I didn't know what the market was going to be." Meanwhile, to make ends meet, he worked for a local rust-proofing shop for two years. In 1979 he took a chance and opened his present shop. Shortly afterward he purchased a small advertisement in *The Shotgun News,* a U.S. collectors' journal, offering one of his finished guns. Within days the inquiries started flowing, and a gentleman from Michigan arrived on Frank's doorstep to place an order for a matched pair of shotguns. He was followed by another American, who knocked on Malin's door and offered to represent him for further sales in the United States.

To Malin's surprise, it appeared that he was the only maker of high-grade sidelock shotguns in North America; and his necessarily high prices were no deterrent to business. Within a few months he found himself enviably booked up, and he now has a one-year waiting list for his guns. He's currently working on 30 commissions, including another matched pair for a millionaire in Houston and two special gold-inlaid models for a customer from Saudi Arabia. The price for that pair is $25,000. The fine engraving and gold inlays constitute an art in

DENNIS MILLS

Gerard Friolet, creator of the Saint John River boat at Kings Landing (opposite): bending wood in mysterious ways

themselves, and Frank has since sent for an old English friend, master engraver Ron Collings, to join him in the Melbourne shop. Collings, who is 32, has spent the last 17 years learning his craft, and Malin speaks in awe of him. "He can take a photograph of your face and engrave it on steel or inlay it in gold."

In addition to Collings and Malin's own son, Frank expects his business to grow to a six- to eight-man shop over the next few years. As he says, it doesn't matter where he lives, his customers will come to him. And already, as he observes, "Ninety per cent of our business comes from the United States."

Almost 1,000 hours go into making one of Malin's shotguns, and in his 22 years in the business he estimates that he's made between 600 and 700 guns. At full speed now, he says, "I could probably turn out about 18 guns in a year." All of that time and care account for the high value collectors place on his guns. Malin himself calculates that at least 90 percent are bought as an investment or as collectors' items and only perhaps 10 percent for personal shooting. "They're buying the skill and the art of the gunmaker," he says. And they're betting that that skill and art will be even more highly prized in the years to come.

While doubters might question the linking of art and gunmaking in the same breath, it poses no doubt for anyone who's handled a classic Victorian-era gun and marvelled at its rich patina and the remarkable grain of its wood. The secret of that grain is one of the paradoxes of fine craftsmanship: that it can, at the same time, be both well-known and lost forever. The actual processes of important techniques have not been lost, since they exist in written, detailed descriptions; but translating a complicated procedure from paper into reality can be quite a different matter. Malin points to the example of Damascus steel gun barrels made from plaited and twisted steel rods. "There's nobody about now who's got the knowledge and the skill to make them," he says. As he explains, we can know all about how they were made, but the actual experience of making them is gone forever. And that experience is priceless because it cannot be learned except by example and practice. "You can read it out of a book, and it'll tell you how to do a thing. But when you do it out of a book, you get into all kinds of problems. If you make a mistake, how do you get out of it? The only way

PETER CROYDON

Saul Wolfman with his custom-built stereo equipment: relishing freedom and the pleasure of working for himself

you find out is by experience."

That same kind of experience makes Gerard Friolet one of the last of the master boatbuilders, a man who can take a broad axe and an adze, a sure eye and a ruler, and make an 11-metre long wooden boat. The staff at Kings Landing had searched for nearly three years in Nova Scotia and the United States before they approached Friolet and asked him if he could build such a boat. "It's only a boat," he said and made one for them.

At 64, Friolet is a short, stocky man with scarred and lumpy hands that look like well-worn tools. He's used them for nearly 40 years of building wooden fishing vessels for his fishermen neighbours in Caraquet, N.B., a French-speaking village of approximately 4,400 located 60 kilometres from Bathurst, the nearest train station.

Friolet built his first boat in 1940. But before that, from the age of 16, he worked with his father, a carpenter and boatbuilder. "It was a trade," he says, "like any other trade." But later, as he speaks with pride of the vessels he's built, he says, "Boatbuilding is in my blood." In fact, for the Acadians in that part of the country, boatbuilding was as necessary a craft as providing shelter for their families by building their own houses. Years ago a fisherman would build a boat and sail it out to sea. But like everywhere else, some men found that they were better at some things than others. And while the community as a whole was largely self-sufficient, men like Friolet and his father might well spend their lives hiring out their services to build boats and houses locally. "The first boat that I built was done through a contractor," Friolet recalls. "Later I had to grope my own way and try to learn through experience." He grins shyly and admits that the first time he went out on a boat to test its seaworthiness, he became violently seasick. And maybe, he adds, this was a factor that kept him on dry land, "building more boats so I wouldn't have to sail them or fish for a living."

New techniques and modern mechanization have inevitably changed the kinds of fishing boats being built in that area today. With his decades of experience, Friolet knows many tricks of the trade that a modern boatbuilder might hesitate to attempt. But he quickly disclaims any knowledge of special secrets. "It depends on whether a guy has the nerve to try to do it. It requires self-confidence." And like Frank Malin, Friolet explains that the problem may

PETER CROYDON

Frank Malin, gunsmith, surrounded by the tools of his trade: the honorable craftsman isn't lost — just hard to find

not be the loss of trade secrets so much as the lack of experience.

What makes a good craftsman is a combination of both knowledge and experience. And in effect, the experience is the secret, since it cannot be learned from books. Friolet's trade is dying, he admits. The old skills have been so effectively replaced that they are forgotten. And yet Friolet himself is not sentimental about his status as a kind of endangered species. "As for myself, I chose to build boats because I loved building boats. I loved it because it was a hard trade."

Love of one's craft bespeaks a special kind of dedication. There are certainly easier ways to earn a living and plenty of ways to make more money, and words like "love" and "dedication" have very little to do with the average person's job. But then, to be a craftsman in our time is to be a kind of nonconformist.

Certainly a man like Jim Olson doesn't conform to the common image of a Saskatchewan farmer. But on the other hand, he doesn't look like the stereotyped notion of an artist, either. Like Friolet and Malin, he has worked all his life with his hands, as a farmer until 20 years ago, then as a saddlemaker and silversmith. Today, at 53, those same big hands create delicately tooled and engraved silver buckles for rodeo stars and western cattlemen whose idea of jewelry starts with the purely functional and utilitarian: a buckle holds your belt together, and a saddle — even if it's got $5,000 worth of silver mounted on it — is something to ride on.

Olson got interested in leatherworking, he says, because "it's something to do in the long winters." And after he made his first saddle, "I carried on from there. I was self-taught until I came out to Felmor Eamor's [a High River saddlery] in 1958." He worked there for nine years, while his interest in jewelry started in 1962. "That was pretty well self-taught, too." He learned a few basic techniques at a class in Calgary. Then, in that same year, he received his first public recognition, a silver medal for design at the Pacific National Exhibition in Vancouver. That clearly pleased him, but at the time he had to confine his work to only a few buckles and rings. Eventually, in 1967, he took a job with another saddlery in Calgary. But after about eight months he chanced on the opportunity to buy out the silversmith who was then producing the buckles for the rodeo association. Olson packed up the equipment, and the accounts, and moved back to High River.

But even as the business grew, a tragedy occurred; in 1970 an infection cost Olson his sight in one eye. But he continued working with the help of his son, Rod, and later his daughter, Denise. "You can overcome things if you really get your mind set on something," Olson explains. "Of course, you've also got to make a living."

By working long hours, Olson does manage a decent living. But as he says, "It's a long, hard struggle. Anyone starting up today — especially with the prices of metal — would have a hard time of it." Olson figures that it took him 10 years before he felt sure of himself and his work. "I'm still not satisfied," he says, "but I feel I'm turning out a pretty good product." Then he adds, "It's a long, drawn-out process," and chuckles at the thought of anyone imagining that there might be a fast buck to be made in his line of work.

It's not surprising that he lacks any real competitors, and as a result, Olson's business is growing. When he started, he says, he made about 250 buckles a year. But this year, with the help of his children, he expects to produce nearly 1,200. Olson's buckles start at $70 for a nickel and brass model, and his silver buckles average $275 apiece, while special orders can vary considerably. He did one last summer for $1,400. "If you get into diamonds and precious stones, then there's no end to what the price could be."

As Olson explains, "We base our price generally on the weight of the metals used." The actual working time it takes to make a buckle depends upon a number of factors, and Olson says that sometimes he simply doesn't count the hours, especially if he gets interested in a particular job.

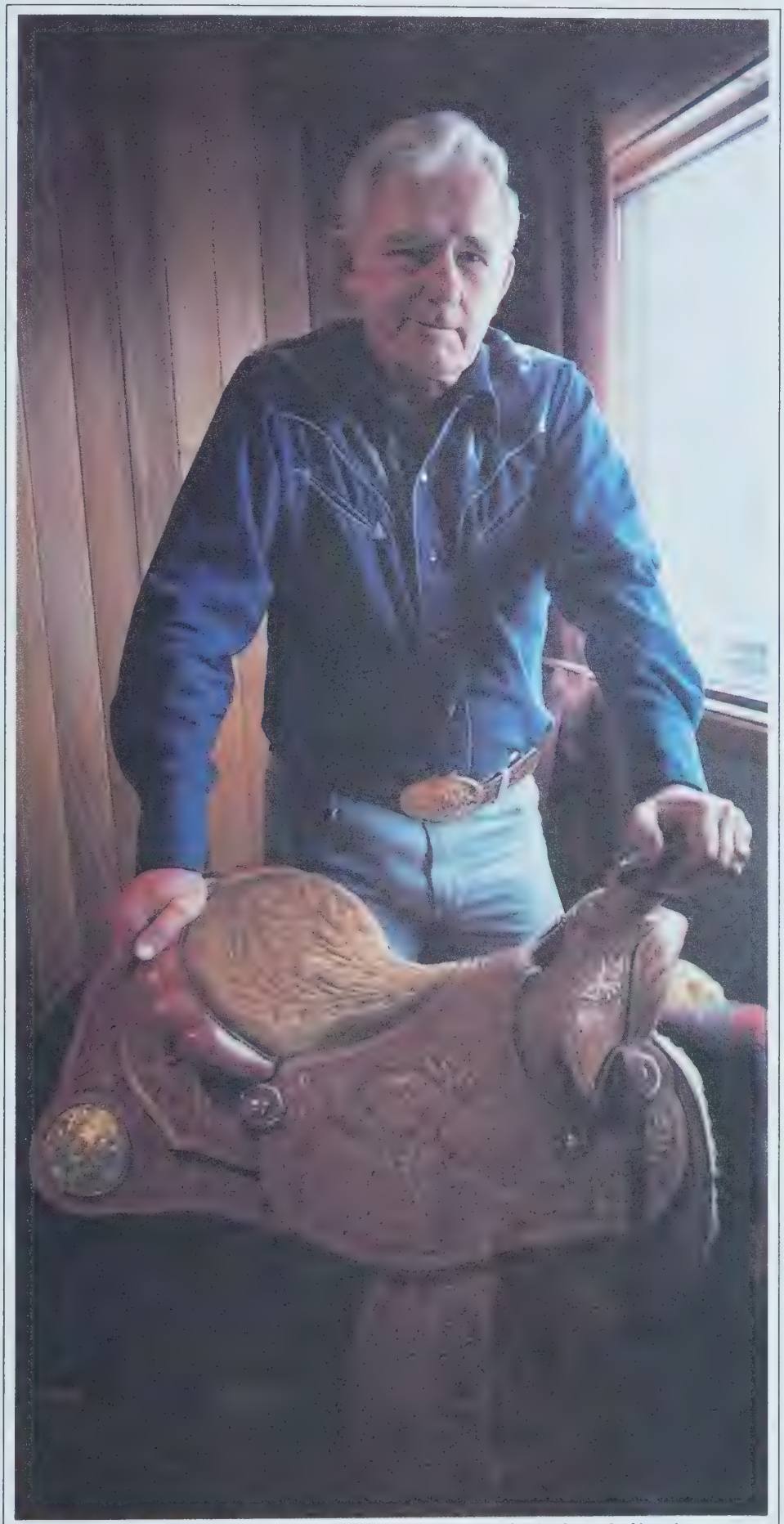
Jim Olson has made buckles for Prince Andrew and Prince Charles, for skater Karen Magnusson and bankers, corporate executives and oilmen. "Every Calgary Stampede parade marshal's got one of our buckles," he adds, "and there's quite a few of them." His work is already so well-known among prospective customers that he doesn't have to advertise his services. "We really should keep it quiet," he jokes. "The work just picks up. As long as you do good work, I think word of mouth is the best advertisement."

Word of mouth is the only way you're likely to find out about Saul Wolfman, too. Among certain Toronto hi-fi aficianados, Wolfman's handmade amplifiers and other equipment bring nothing but praise. But then, too, there's a certain astonishment that anyone would devote himself to building consumer electronic equipment by hand in these days, when giant Japanese factories churn out millions of pieces of stereo gear like so many high-tech sardine tins. No one expects to buy a handmade 35mm camera or a custom-built pocket calculator. The products of high technology are supposed to be mass-produced, but none of this is news to Wolfman or particularly distresses him.

Over the last 30-odd years, he's built hundreds of amplifiers for his customers. "When I was a kid," he recalls, "I used to build crystal sets for all the kids on the street — custom-made crystal sets," he laughs. He even remembers the price — 75 cents apiece. "Probably those were the first solid-state units on the market." Then he adds, with obvious pride, "I can remember making a crystal set work so efficiently that it would drive a speaker and fill a room with sound." He was only 13 then, but from those small crystals, a career grew.

He went on to study electrical engineering and worked as a radio installer around Toronto. "I always dabbled on the side," he says. "I was doing it for love, not money." Then, in 1949, he contracted polio. "I got crippled up pretty badly, and this really put a damper on everything. I wound up in the hospital for almost a year."

Deeply depressed, he started and then had to give up building a television set because it was too heavy for him to handle from the wheelchair, and besides, one of his arms was weakened. After he got well enough to move about, he found a job as the service manager for a new Toronto television manufacturer. But that company folded three years later. As his wife, Eve, recalls, "He came



ALAN ZENUK

Jim Olson, silversmith and saddlemaker: a special kind of dedication

home one day and said, 'I have to work for myself.' We sold our home and built this place. That was in 1953."

Several years later, Wolfman heard that the Royal Conservatory of Music was looking for listening equipment specifically designed for earphone use. No such equipment existed commercially at that time. Wolfman got the job and built the conservatory a roomful of his amplifiers. His reputation spread among institutions, and he eventually did similar jobs for the Universities of Toronto, Western Ontario, Guelph, Queen's, McMaster, York, and as far afield as Brandon, Man. "I won't say they were giant contracts. They were modest, but they kept me going."

At the same time, he found himself engaged in making and installing custom hi-fi equipment for various prominent local families. One early supporter was Peter Munk, who helped found Clairtone. Wolfman's equipment was solidly made; if he competed at all against the huge commercial manufacturers, it was in terms of quality and reliability. Even now he marvels that he's taking orders from a second generation of customers, the children of parents who are still using the equipment he built 15 to 20 years ago.

His handicap, and what he calls his lack of business sense, may have been responsible for his becoming an electronics craftsman. But at the same time, he relishes his freedom and the pleasure of working for himself. And if his chosen field isn't one that's commonly recognized as a traditional craft, Wolfman is a craftsman, nonetheless. It's a matter of attitude more than anything else. He might have expanded or gone into commercial production. Other electronic tinkerers have done so and built a mammoth industry by sensing the marketing possibilities of a few good designs. But for the tinkerer and the perfectionist, the pleasure of making things with his own hands and the pride of making each object better than the last — all these overcame the other, crasser possibilities. Or maybe it's simply in his blood. And like his tailor-father before him, he wants to fit every customer to his needs. Perhaps the craftsman survives because he knows he's wanted. And equally important, he knows who wants him. □

SUMMER AFTER SUMMER

Celebrating 50 years of Couchiching

BY GORDON DONALDSON

ILLUSTRATIONS BY HUNTLEY BROWN

Geneva Park, Lake Couchiching, August 1980. The president of the 49th annual conference leans back in his lawn chair, under a weeping willow by the edge of the sunny, but ever chilly, Ontario lake, and wonders why people still come, summer after summer, when there are so many more exciting or relaxing things to do.

"I suppose," John D. Harbron says, "the person who could define why the Couchiching Conference continues to exist would be a behavioralist, totally detached, who could take all the talk and memories and analyses and put them all together. But then he might just throw up his hands and say, 'I don't know.' "

Harbron is a journalist, now the foreign affairs analyst of Thomson Newspapers. Fifteen years ago he covered the conference and wrote it off as a dying institution. Thirty years before that, editorial writers were denouncing it as a waste of summer days. It has never reached a consensus, passed a resolution or lobbied to change Canadian or world society. London economist Robert McKenzie, who was taken there as a boy in 1936 and returned as a speaker last year, describes it as "a quintessentially Canadian affair, with an air of perplexed concern." To others it is the intellectual Grey Cup of Canada.

It is unique: a kids' summer camp for grown-ups at a YMCA park near Orillia which, through its international reputation, attracts world figures, then cuts them down to size by making them line up for non-gourmet meals, scrounge drinks and, for many years, wait to use the unplumbed facilities in the bushes.

Lester Pearson, Pierre Trudeau and René Lévesque cut their debating teeth there before any of them entered politics. John Diefenbaker watched them as a backbench MP serving on the Couchiching committee. United Nations negotiator Ralph Bunche was one of the few dignitaries who managed to catch the wily Couchiching bass. British Labor Party leader Hugh Gaitskell square-danced, although historian Arthur Schlesinger Jr. asked why he did it when he had no sense of rhythm and there were

no British votes to be found in Canada. English wit Malcolm Muggeridge horrified the locals by changing into his swimsuit on the beach, English-style, rather than in his room. Chinese author Han Suyin gained an appreciative audience for her early morning outdoor yoga exercises, and Henry Kissinger talked all night about what he was going to do (and later did) for peace in the Middle East.

This year, from July 29 to August 3, Couchiching is celebrating its 50th anniversary. As Harbron cheerfully admits, it still has no organization, no particular structure and no fixed purpose. But the camp now has indoor plumbing, fresh speakers still come, and the old "Couch" hands still welcome one another with hugs and kisses. It is, like many Canadian institutions, valuable in some undefined way but constantly underestimated.

Its founder, Dick Davis, who's now 86 but looks 20 years younger, recalls its difficult birth. The idea of a forum on public affairs was pretty radical 50 years ago, and people who analyzed society or agonized too loudly about it were labeled "radicals," a nasty word in many quarters.

"It wasn't as commonplace to sit around and chew the rag," he remembers. "You had to be careful." The young Davis learned this when, as a YMCA worker in Montreal, he organized the Young Men's Forum. When he invited a leftish American professor to speak to the group, an influential public figure demanded that the Y ban this "communist" from its forum. Davis resigned but withdrew his resignation when his opponent was persuaded to relent and the professor spoke. In 1929 he moved to the YMCA national council in Toronto and ran staff training courses at a summer school on the shores of Lake Couchiching.

"It seemed to me that what the staff needed was not more job training but something that would broaden its view of the world," he says. So with the Y's blessing, he asked the head of Upper Canada College, Dr. William L. Grant, to head up a committee to prepare a conference program.

The first conference of the Canadian Institute on Economics and Politics opened in the summer of 1932, with Dr. Grant as chairman and Dick Davis as secretary. Interested outsiders were welcomed, and within a year they greatly outnumbered the YMCA trainees. They were professors, schoolteachers, social workers and various kinds of professionals — roughly the same mix and the same number, about 200, who attend today. There were few businessmen, and *The Toronto Evening Telegram* raged against the radical goings-on by the lake. The editor of *The Orillia Packet* saw a hotbed of communism a few miles from his town, the model for Stephen Leacock's Mariposa. Couchiching speakers were causing eruptions as early as 1934. Professor Frank Underhill created a furor at the University of Toronto over statements he made at the conference. He urged Canada to tell Britain we would not support her in the next war in Europe, which he forecast would happen within a decade. On the other side of the political scale Nicholas Ignatieff, from a noble Russian family, made a scathing attack on Stalinism.

The conference was still very much under the influence of the vigorous Christianity of the Y, which paid for it, and the other religious organizations that supported it, including the United Church, the Church of England in Canada and the Student Christian Movement. (The Trades and Labor Council of Toronto was another supporter.) The days began with worship. Liquor was not available, but tea was served "in the English manner," according to a 1934 report.

Delegates doubled up in cabins or cottages. Dick Davis chose the roommates and recalls one appalling mistake. "We didn't have many French Canadians at the time, so when I saw a Jean-Marie Beaulieu registered, that sounded like a woman to me. So when Agnes Macphail [the militant farmer-labor leader] arrived in her little two-bed cubicle, she found Professor Beaulieu, a man, in the other bed."

Davis left the conference soon after the war but was invited to the 1949 event, which marked the start of the CBC's involvement. Murray Ross, who succeeded him as secretary, had persuaded the CBC to carry the evening sessions live by radio and, in return, pay for imported speakers.

The opening broadcast was important. At the beginning, the chairman introduced Davis as the "father" of Couchiching. He was then to introduce the first speaker, Douglas Abbott, a federal cabinet minister. "Not knowing I was on the air I said this 'father' business reminded me of a woman who was suing for divorce. The judge asked her why. She said 'I don't think my husband is faithful to me, Your Honor. I don't believe he is the father of my child.' That caused a ruckus you wouldn't believe," Dick Davis chuckles. "Neil Morrison, who was in charge of public affairs at the CBC, was furious. He had arranged this elaborate broadcast deal, and the first thing to go on the air was a dirty story. After the meeting Diefenbaker said to me, 'Dick, I didn't hear a word Doug Abbott said. I sat there chuckling over your story and picturing an old couple I know in Prince Albert who're very serious about this kind of conference and would be glued to their radio. I wonder what they're saying.' Nothing I did in my life attracted more attention than that story."

Times changed after the blushing forties. Dr. Ross, now president emeritus of York University, hosted parties in his cottage after the evening sessions. Drinks were discreetly poured. A veteran Couch delegate remembers her first invitation to partake of the "official" Couchiching bottle. "There were seven chairs under a naked light bulb and seven paper cups and seven drops of whiskey poured into each. If that wasn't enough you could always drink with the press, who had unlimited, unwatched supplies."

Murray Ross gave a distinguished Dutch visitor and his beautiful young wife the camp's best room. She looked around, opening cupboards, then

inquired, "Where's the bath?" Dr. Ross smiled and pointed to the lake.

The religious tone was disappearing by the fifties, although a Sunday service was still part of the conference. Han Suyin describes her 1959 visit in her new autobiography, *My House Has Two Doors:* "The motto of the conference was plain living and high thinking. High living and plain thinking would have been more agreeable. But deliberately the guests of the conference lived in spartan conditions, and Murray Ross, looking like a boy scout, plunged into the cold lake water every morning."

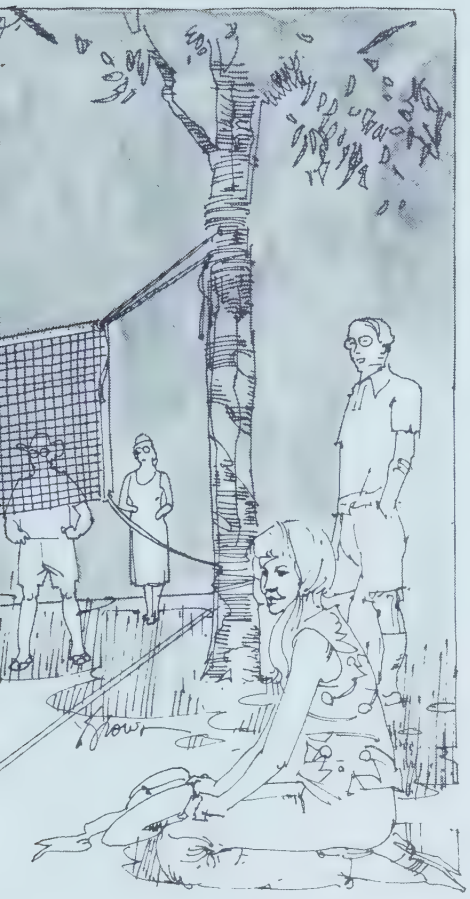
Sheila Mackenzie arrived from Toronto in the early fifties as part of a new wave of young university graduates out to rejuvenate Couch. The CBC had taken firm control and structured sessions to fit its programming. They began and ended on time and were moved along by competent chairmen. "The CBC wasn't allowed to have any opinions of its own at the time," Mackenzie says, "so it used responsible groups as intellectual fodder. People in respectable circumstances listened to Couchiching word for word every night.

"The camp was the Canadian cottage writ large. We ate family style, and we sang the YMCA grace. It was probably bowdlerized, but this is how we sang it:

Be present at our table, Lord,
Be here and everywhere adored.
These mercies bless and grant
that we
May feast in Paradise with Thee.

"Then we'd pass the beans. We'd all been to camps and boarding schools and knew that the thing was to grab enough."

The conference stayed well abreast and often ahead of the times in its choice of topics. Delegates were talking of war long before war came and peace long before the war ended. It dealt extensively with China in the years Canada was considering recognition of Mao's state, and it brought personalities from the Third World when the winds of change were still light breezes. In recent years confer-



ence topics have read like a calendar of current concerns: inflation, disarmament, the conserver society, the aging society and, in its 50th year, the interdependence of the industrial and developing worlds.

Discussions were intense. As delegates were cooped up together for up to a week there was what York University president Ian Macdonald calls a kind of shipboard situation. "At the broadcast sessions you couldn't cough, move or lean back in your squeaky chair. It was hot and stuffy. So when it was over there was a tendency for high jinks. I think in a real sense the conference took place in late-night discussions in the cottages."

The speakers talked on into the night. Sometimes they took part in midnight swims. They were dragooned into performing in unrehearsed play-readings and were lampooned in skits.

Couchiching tried and failed to converse with the counterculture of the sixties. Groups of teenagers were brought into conferences on the revolt of youth and the new morality, but the hoped-for communication never happened. The generation gap loomed wider, and no amount of high thinking could bridge it. And there was a shortage of French Canadians. The Trudeaus, Lévesques and Daniel Johnsons had gone on to other things. As Ian Macdonald pointed out, it was becoming once more a southern Ontario rather than a Canadian conference. The old Couch hands were getting older. Frank Peers, then a CBC executive, now professor of political science at the University of Toronto, noted that the hard core of "mostly concerned and partly informed citizens" was dwindling. At the end of the sixties the CBC decided to withdraw. The conference was costing the corporation a mere $4,000 or $5,000 a year in speakers' costs — plus its own costs in providing hours of radio and now television broadcasting — but the CBC was being permitted to generate opinions on its own rather than getting them secondhand. A new era in broadcasting had begun, and Couch was considered old hat.

The CBC's Eric Koch was given the job of extricating the corporation. He was a little unhappy with the decision, though he concedes that at that time it was difficult to make exciting television out of the Couchiching Conference. He remains a Couch loyalist and was chairman last year and will be again this year. "The CBC lent a professionalism to the conference that it needed. It's now all hand-to-mouth and dependent upon donations and volunteer labor, except of course for the executive director."

Conferences, suspect in the thirties, are now a big business. Celebrity speakers command huge fees (though some will waive the payment). Henry Kissinger, who came for peanuts and plates of beans in the sixties, now charges $15,000 and up for a speech and is booked up for years in advance. Koch believes Couch can carry on as it's going but would be greatly improved by a new injection of money and professionalism from the broadcast media. Now retired, he urges the CBC to renew its link — the cost would be relatively tiny — or failing that, the cable-TV empires should pick up the torch. They would gain prestige by carrying the kind of long, live show best suited for cable.

Kurt Swinton, former Canadian head of Encyclopaedia Britannica, is the first businessman-president of Couchiching. "The business world has always looked upon us with a mixture of disgust and contempt because we just talk and don't do anything. But gradually we seem to be winning them over."

Swinton, an old Couch hand from the fifties, returned recently after 10 years in England and decided the conference now looked like the annual meeting of a geriatric society. Though it is open to the general public as well as members, the conference was failing to attract new participants. Swinton promises to replace the officers and the committee members with younger blood and develop satellite Couchichings in other parts of Canada. (Dick Davis already tried the latter scheme in the thirties, and it didn't work.)

"We're probably the only organization in the country that can discuss things without having an axe to grind," he says. "This is adult education in its finest and most sophisticated form. There is no comparable institution in North America."

The lake itself, heart and soul of the conference, is now slashed by the trails of speedboats and dotted with sailboats. There are other things to do in summer than talk and think. Most conferences are directional; everything is to the point, and a conclusion must be reached. Like the speedboats, they reach the distant shore as fast as possible, then have nothing to do but roar back. Couch dawdles along, taking a laid-back look at things in the dog days of August.

John Harbron watches the boats rush past and reflects that people are now determined to compete, whether at work or on holiday, rather than sit back and listen to some of the great thinkers of the world. Yet Couch survives, apparently as permanent as the lake itself. Each spring the ice melts, the willows weep again, and soon the thinkers return, still perplexed but undismayed.

Couch could never exist anywhere but in Canada or anywhere but on Lake Couchiching. They say that its Ojibwa name means the Place of Big Winds. □

For more information on the Couchiching Conference contact The Couchiching Institute on Public Affairs, 20 Eglinton Avenue East, Suite 203, Toronto, Ont. M4P 1A9

MUSIC AND MEMORY

Revisiting the home of the gods

BY ROBERT THOMAS ALLEN

GREECE is one of the few places you can visit where life is different than the life you just left — in Toronto or Montreal or Winnipeg. I don't mean things like drachmas instead of dollars or olive oil on your tomatoes or wine flavored with pine resin. I mean that the mainstream of daily life seems to have lingered lovingly around a lot of things you thought had gone forever.

You'll be walking along a street in Athens and get a whiff of cake, candy, chocolate and coffee that makes you head through an open doorway in a kind of trance, as if you'd heard the sound of a Victrola coming from an ice-cream parlor on a July morning in, say, 1929. There's a place called Dionysos Zonar's on Venizelou Street near Constitution Square, a rich and mellow old grotto with a mezzanine and upholstered wooden chairs, where women, dressed for downtown, and their daughters and businessmen with open attaché cases sit in a very relaxed mood amid mirrors and polished wood and big glass jars, looking out at the morning sunlight, writing letters, talking quietly, drinking lemonade or capuccino, a gentle breeze coming in the door. It's one of the world's great sitting places.

In the evening a strange, magical mood settles over the streets. Families promenade downtown, the kids holding their parents' hands, pure white shorts and socks and dresses gleaming in the dusk. Everyone is strolling in shadow, yet there's still a trace of gold in the air that lights up the girls' bare legs, and their faces seem caught in the glow of a vague promise, which indeed they are. A breeze makes the plane trees wave, and there's a faint fragrance of perfume on the air from hundreds of women dressed up for the evening.

Music seems a natural part of the daily life of Greeks. Sometimes you hear singing rise above the roar of traffic, taxi horns, shouts of lottery-ticket sellers, cops' whistles, and turn around from peering in at the shadowy stones, candles and shining brass of an ancient church and perhaps see four girls going down an alley of potholes, crumbling sidewalks, barrels of olives, handcarts of bananas, their arms around one another's shoulders, all singing the melody of some pretty, light, bouncy, plaintive song, as if headed back through time to some sacred grove. One cold day at the shrine of Poseidon on the windy headland of Sounion, I saw a group of teenage girls on a school excursion standing in a circle facing one another, holding hands and singing while they waited for their bus; and I remember another time hearing pretty music coming from a kind of cluttered bin in an old market and seeing a gray-haired man, sitting on the ground beside a display of coins and leather belts, head bowed, concentrating on the strings of an instrument like a tiny guitar, making small, sweet, private sounds, as if talking to himself in music, perhaps about some sad memory.

You often sense the tremendous age of this civilization. Sometimes, in a dreamy, ancient village, such as Pythagorion on the island of Samos near the Turkish shore, a kind of after-vision will make you stop and turn around as if you had heard someone call your name, and you look along a hot white slot of a cobbled street where the flowers outside the houses make sharp black shadows, or at an empty square that lies there, still and sunny and waiting, reminding you of something you almost remember — but not quite. Standing on the pebble beach, listening to the wind rustle the oleanders or watching the fishing boats tied up at the quay heave gently as if stirring in their sleep, it's easy to imagine the presence of the geniuses of this land who, over 2,000 years ago, began asking the first inspired questions of science about the nature of the universe.

There are probably a lot of visitors to Greece who will wonder how I could miss an entire world of resort beaches and dining beneath the stars and hilarious nights of belly dancing and breaking glasses. But what I enjoy in Greece is moseying around, finding bits and pieces of history described in a book like *The Stones of Athens* by R.E. Wycherley, emeritus professor of Greek at the University of Wales. Many of the important sites of the ancient city are now buried in commonplace surroundings, which makes their discovery all the more satisfying. You can stand on a street that runs along the subway right-of-way and reach through a patch of weeds and touch a stone that was part of the city wall 25 centuries ago. It's now part of the foundation of a dilapidated modern house. The site of Plato's Academy — which was founded 2,400 years ago, lasted 900 years and

was the ancestor of the universities of the western world (Simon Fraser and McGill, for instance) — is a hot, dry weedy, empty lot in a squalid, crumbling, dusty part of town, with some excavated marble coffins lying out in the open. Sometime in its long history the region was a burial ground. When I was there somebody had thrown a toilet bowl over the wire fence onto the ancient site. You reach the historic region called Kerameikos through such awful traffic, dust, delapidation and exhaust fumes that you begin to feel as if someone had directed you to, say, a concrete block factory as a practical joke. But if you keep going you find a sunny, peaceful valley, the site of the ancient Dipylon and Sacred Gates, once a busy spot — like Avenue Road and Bloor in Toronto — the entrance to the ancient city for parades and troops, traders and travelers, the way to the Academy and the Eleusian mysteries of fertility and rebirth, and to Piraeus, which was and still is the port of Athens. A weedy little stream, the Eridanos, still leads its secret, quiet life here, looking as if it has frogs in it and blue darning needles hovering over it. It's a pleasant place to spend a sunny morning, sitting on a warm block of marble listening to a bird make whispering sounds in a nearby thicket.

The most unlikely location of all, in its way, is the site of Aristotle's Lyceum. The gardens and grounds of the man whose works fill whole sections of shelves in today's libraries and university bookstores lies somewhere near or under the hundreds of outdoor tables, the airline offices and luxury hotels of Constitution Square. A circle of stones, probably part of the Lyceum gym, lies in a secluded corner of a nearby park amid pine needles, tins and wrappers — Canada Dry, Sunripe Orange, Carnation Milk, Sinatco Cola, Karelia Cigarettes. A weather-worn slab of stone stands on a high pedestal opposite the King George Hotel beside three telephone booths, where a girl on the phone, making a date for the evening, can look absently at its barely discernible inscription: "Boundary of the Garden of the Muses." (A waiter told me it gave the distance to places like Salonika.)

We made a trip to the site of Kommos on the island of Crete, an archaeological project sponsored by the University of Toronto and the Royal Ontario Museum and directed by Joseph Shaw, a professor in the department of fine arts at the University of Toronto. It's on the south shore of Crete, reached from the city of Herakleion by bus through beautiful countryside — dozing mountain vineyards that, when you look down on them from the mountain roads, give you the feeling that you're looking into a big salad bowl. It would be hard for anyone who hasn't seen this part of the world to imagine how remote and drowsy it is. In the village of Pitsidia, near the site, you'll look down a narrow street and not see a soul, except perhaps a pale, tall young student on vacation from England, sitting at a slanting table reading and having a beer; or you'll see four village men sitting on kitchen chairs in the shadow along the front of a café, as if they've been pranged by some cosmic ray that spared only the chicken that's pecking beneath a dusty olive tree; or a young man and woman sitting at a table beneath some vines having lunch, looking as if they've been having lunch for two years, preserved in some delightful invisible ash that stops the progress of time. A rooster crows. A sheep gives a harsh, honking sound. The surrounding fields and hills are empty and still.

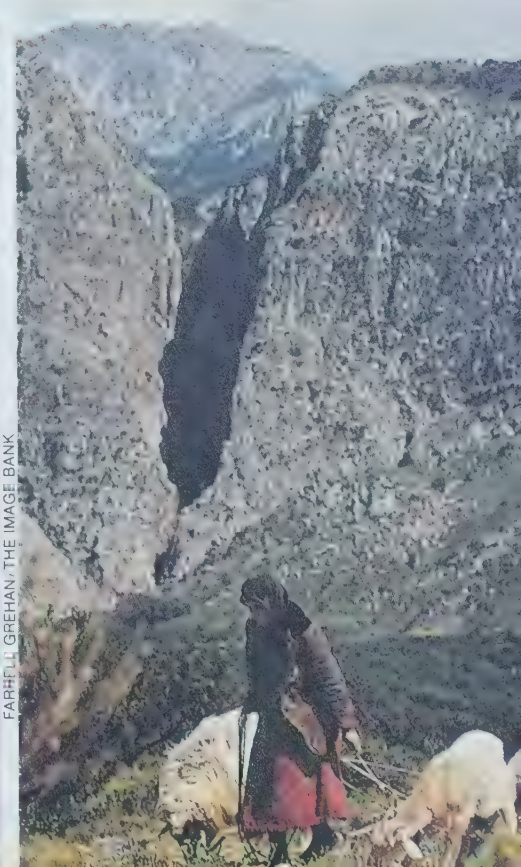
Kommos is on a beautiful, uninhabited stretch of shoreline that makes a sweeping curve to the north. The sand that has been cleared from the archaeological site forms a huge mound on the beach. (In one place the diggers struck roof tiles beneath nearly two metres of sand.) I climbed up the bank through prickly shrubs and sat at the top, with the wind in my ears and the lovely, lonely, rhythmic sound of the waves that formed a delicate fringe on the sea, like lace stretching along the shoreline toward some hazy, almost invisible mountains. I sat close to an excavated wall of a harbor community that thrived and bustled 3,500 years ago, in Minoan times, ancient to the ancient Greeks. I wondered who was the last person, at the end of this great, long civilization, to lean against those stones or rest his or her hand on that stone right there — perhaps after supper, before going to bed. You wonder if the noisy kids, for instance, playing basketball in an outdoor court beneath your hotel balcony, are direct descendants of the people who lived within those walls. A similar thought had come to me about the youngsters on Samos one soft night when I listened to them playing beneath the stars, their voices coming out of the dark — "Ela! Ela!" ("Come on! Come on!") — and also in Athens, where city life has gone unbroken for more than 5,000 years.

You somehow feel this continuity as you watch scenes of city life today: a meticulously groomed woman in a gleaming white blouse picking her way past the worn marble steps to a murky cellar like a bandits' cave, along a broken, narrow sidewalk, through junk, truckloads of garlic, falling plaster, crates, snarled traffic and spilled water, looking calm and thoughtful; or two young lovers in the National Gardens whispering to one another on a bench in a warm patch of sunlight between the eucalyptus trees, watched by a calico cat lying with her front feet folded under her chest; or an old man sitting with his elbows on his knees, looking at the ground in Constitution Square when the setting sun is gleaming brilliantly through the geraniums.

It may have been a sense of the generations of men and women who have lived here — worried, loved, quarreled, drank, read, laughed, ached, wondered, worked — that kept me awake on my last night. I had wandered around and taken a last look inside the church of Lycodimou, which was built around the year 1,000 and the name of which may be a continuation of that of Aristotle's school, the Lyceum. It was all gilt and crystal and burning candles, and a man and woman sat beside their packs on the steps having something to eat. I got up at two in the morning and leaned out my window, looking down on Nikis Street. A man stood all by himself in the light from a street lamp. His shadow was exactly the same length as he was, like the sides of one of Pythagorus' triangles. I watched a thin procession of young wanderers with all their gear on their backs walk silently past along the opposite sidewalk, like Plato's illustration of the shadows on the wall of the cave — the phenomenon projected by the eternal reality — and a drunk heading for home or trouble, and, wondering where we were all headed, I went to bed. □

PETE TURNER/THE IMAGE BANK

The mainstream of life has lingered lovingly here ....



FARRELL GREHAN: THE IMAGE BANK

THE LAST GOOD-BYE

Closing the door on the family home

BY MARTIN O'MALLEY

THE October wind scattered the last of the elm leaves of 1980 and pushed a cold rain at me as I walked up the sidewalk to the peeling, slightly lopsided two-and-a-half storey house. It was that sort of a good day for a funeral, for long good-byes, that sort of a good day for tackling sad but necessary things. I had returned to dispose of the family home.

I felt like an executioner. No, not exactly; I felt like the man whose duty it was to wake up Old Shep, the dog, and take him behind the barn and put him out of his misery. No, not even that; it is one of those half-formed analogies, for I had never had to do something like that before. Someday I will be called upon to perform some sad but necessary duty, and then I will be able to say it is like returning to dispose of the family home.

This was our house. This was where I learned to walk and talk, where my father and mother, my three sisters and I all had our secrets and our codes, where we all sat every night at the big oak table in the dining room, where we listened to *Suspense* and *Lux Theatre,* where we watched Ed Sullivan and Jackie Gleason, where we rode out the first storms of body and mind, where we left on dreadful, nighttime races to the hospital, where we learned our loves and fears and hates and where the four of us managed, somehow, to grow up — and leave.

One by one we all left McMillan Avenue, an ordinary block of ordinary houses in southwest Winnipeg, though mostly I remember it as lush and incredibly eventful. Pat, my oldest sister, left in her mid-20s, when she got married. It felt like a wheel had fallen off. I thought things would never be the same; and, of course, they never were.

Kathleen left next, then I left, then Margaret left, then some years later Dad died, and left, and then only Mom remained. I think she stayed on out of a sense of duty, as a custodian or curator, to keep the house in the family. She knew we treasured the place. She knew we all reached back for it no matter where we were. The times I visited I'd pour myself a rum and Coke (my "usual" only in Winnipeg) and sit on the screened-in veranda and look out at the street through the lilac bushes. Soon enough in my mind's ear I'd hear us kids playing under the elms, yelling: "Red Rover, Red Rover, We call Marteee over!" And I'd see the long-legged Protestant girl in the abbreviated Kelvin High tunic walking by, peeking sideways at the house, holding her books to her chest.

It was a Thursday afternoon. I had, at most, five days to do the job, to clear out 42 years of family home and relocate Mom one-and-a-half blocks away in a one-bedroom apartment across from the church. My sister Margaret would arrive on Saturday from Tucson, Ariz. The job meant the physical moving, going through family records, saving what should be saved, throwing out what should be thrown out and selling what could be sold — in five days. God may have made a world in six days, but He didn't have to stop at old photographs and cope with that melancholy paralysis of nostalgia.

"Where do we begin?" I asked Mom, who was sitting in the living room across from me on that twice-reupholstered sofa Dad bought for $100 fifty years ago. I sat in the faded green art deco chair in a corner of the living room, under the Olde English Hunting Scene.

She said she didn't know where to begin.

It was time for an inventory, so I walked down the wooden stairs to the basement, which looks and smells as a basement should: brick and dust. No ping-pong table down here. My dad's records were in old file boxes on his workbench, the same workbench where he once labored for days to make a red wagon for me. There were photographs of him when he was my age, 41, but he looked much more severe, much more — competent. He came to Winnipeg from Regina in 1922 to work as a reporter, but he always was The Editor to me. Tough, demanding. An old newspaper clipping fell out of a folder, a clipping of a column pasted on a sheet of copy paper. It was signed: "To one of my best friends, Fred O'Malley, with many thanks. Ralph Allen." It was Ralph Allen's last column for *The Winnipeg Tribune,* the famous "Dear Father Underwood" column he wrote before he moved to Toronto to write for *The Globe and Mail.* It began: "While you, my senescent reprobate, were still a dark blob of ore a thousand feet below the ground in the Iron Range and a gooey mass of rubber sap halfway up a tree in Sumatra, it was written that all things must end. So it need surprise neither of us unduly that today our long association is over."

I noticed other things in the detritus: an old Manitoba licence plate, 2B864. It was the licence plate for my first automobile, a metallic green 1950 Meteor. I remember the digits as easily as the old five-digit telephone number for 1033 McMillan Avenue: 44-352. Astounding how even digits can evoke nostalgia.

Before I walked upstairs I looked up at a rafter in the middle of the basement and saw the chin-up bar Dad installed when I was 13. Once I worked up to 20 chin-ups, the best I've ever done. I did chin-ups every night before I loaded coal into the hopper and removed the "clinkers" from the furnace, and even today my arms have a tone and strength because of it. That night I reached up, curled my hands around the chin-up bar, hoisted

ILLUSTRATIONS BY TOM BJARNASON

myself from the floor and: one, two, three, four, five ...

"Martin!"

Mom was calling from the kitchen.

... six, seven, eight ...

"Be — right — up — Mom."

... nine ... ten ... eleven ...

"What *were* you doing down there?" she asked.

"Chin-ups."

On Friday I woke up early, and it was still blowing and raining. Time to get down to the nuts and bolts of The Move. No fooling around. Call the movers, find out one charges $45 an hour. Call another, find out it's $27.50 an hour. Call the lawyer, a bright young man named Frank Cvitkovitch, who went to the same parochial school my sisters and I attended. We used to call him Frank Spit-in-the-ditch, and now he is a Queen's Counsel. Call Claude, the real estate agent who sold the house to a young couple for $36,000. At first I couldn't believe it. The same house in Calgary or Toronto easily could fetch, oh, $100,000. I had it double-checked and eventually was satisfied that $36,000 was the going price for a house like this in Winnipeg, which no longer is the Chicago of the North. Claude said the young couple, married only 18 months, was splitting up. "But that's not your Mom's problem," he said. "It's in the wife's name, and now she'll have to sell it."

So, after 42 years of O'Malleys, ol' 1033 McMillan Avenue now probably will turn over again in something like 42 days. Everything moves faster these days. Such a hell-bent urgency. Claude dropped by later, and over coffee and sandwiches at the big oak table in the dining room he said that he, too, was splitting up, after being married only four years.

"Oh, Claude," Mom said with a sigh, and that was all she could say and all she had to say.

The rest of the day I transported carloads of pictures, cutlery, glasses, books, cushions, chairs, end tables, blankets, pillows, lamps, cups, saucers, pots and pans to the apartment a block and a half away. At the end of the day Mom and I sat on two green lawn chairs in the new living room, still bare and unwelcome. We listened to the buses rolling by outside, a new sound, and gradually it grew dark and the street lights threw strange shadows on the walls. "The poor kids," Mom said finally, meaning the young couples and the young real estate agents splitting up all over the place.

"It's okay, Mom," I told her. "It's not your problem."

Woke up Saturday morning in the front bedroom on the west side of the house — Pat's room. When Pat left, Kathleen took over the room. I slept in the rear room to the east, Margaret slept in the rear room to the west.

From the window in my old bedroom I could still see the curious configuration of geegaws on the hydro line that managed to spell, for me, "Ha Ah." How many mornings in the dead of winter or in the brilliance of a July did I first see from my pillow "Ha Ah"? My sister Margaret always saw an Egyptian hieroglyphic of magical significance in a flaw in the wood of her dresser.

When we were driving to the airport to pick up Margaret, Mom told me that that morning she had found a lost gold chain in the garbage in the kitchen. "I was looking for it for weeks, and I decided to take one last look through the garbage, and there it was. Now I'll have to make a $5 donation to St. Jude."

"I thought it was St. Anthony who found lost items," I said.

"Oh, he does," Mom said, "but St. Jude's my friend."

We stopped at the new apartment on the way back, and as Mom was getting out of the passenger side she held onto the centre strut of the car, and my sister inadvertently shut the door on her hand. I heard the door click shut on her hand.

"M-my hand," Mom gasped.

I held her hand and could see a crease across her fingers and figured for sure it was a trip to the hospital.

"No, no — No!" she resisted. "I'm fine."

Margaret took her inside the apartment, and I drove to the Safeway down the street for groceries. In the parking lot I experimented, putting my hand in the door and closing it to see if perhaps there was enough cushioning to protect one's fingers. Even when the door was a foot from being closed I couldn't bear the pain. Across from the supermarket was St. Ignatius Church, our parish church, and I heard myself shouting: "Leave her alone! She's 79 years old, so why keep picking on her?" I don't know what I believe in these matters anymore but I still address the Deity, or whatever Forces prevail, in these intensely personal terms. All I know is that when I got back to the apartment Mom's fingers were fine. She wiggled them for us. I'm sure she could have shuffled a deck of cards. Sometimes you get results only with raw fury.

That afternoon a man dropped by the house and bought an old snow shovel for $5. A woman called to say she'd pay 10 cents a copy for old paperbacks. Then a friend of a friend named Dan dropped by with his wife and a young woman studying home economics at the University of Manitoba. They bought the bed, dresser and bureau from Pat's old bedroom, also a broken wicker chair and a fern stand, a round wooden table and the telephone desk in the downstairs den with my initials carved in it. Dan said he would be back Monday with a trailer to help us move the heavy stuff, which meant a saving of the $27.50 an hour the professional movers were going to charge. He also ended up buying three more beds, three chairs, another bureau, assorted odds and ends and the old mahogany Witton piano that hadn't been tuned in 30 years. Things were moving right along. The house was emptying.

On Sunday we spent a lot of time around the big oak table in the dining room, reminiscing. Every second sentence seemed to start with, "Remember ...." There was that snotty family across the street. "I'll never forget calling her one day," Margaret said, "and the maid said, 'I'm sorry, but Miss Barbara is digesting her lunch.' " And there was that boy from Saskatchewan with the Monopoly game, with all the streets of Atlantic City changed to streets of Regina. And the backyard which, incredible as it seems, was big enough for a game of softball. Margaret used to climb the elm tree above the garbage cans to read a book on a summer day, and a neighbor nicknamed her "Calamity Jane." The garden grew tomatoes, carrots, lettuce, Australian cucumbers and sweet peas. There were marigolds, irises, tiger lilies, lilies of the valley, all beside the sidewalk around the house, and wild violets.We used to catch bees in hollyhocks and keep them imprisoned in jam jars. The li-

lacs broke out in late May, as if a maestro brought down his baton, and they perfumed the neighborhood.

When Mom leaves, the oldest continuous resident of the block will be Mr. Donaldson, the retired teacher. When he sees Mom on the street he likes to say, "You're the mayor and I'm the deputy mayor." Not long ago he was eating at the Salisbury House restaurant on the corner (which still sells hamburgers called "nips"), and he had a heart attack, or a near one. When the pain struck he asked the man on the stool next to him to reach into his pocket and get a nitroglycerin tablet. He survived. Now he's trying to gain weight. When Mom leaves that will make him the mayor.

We found a 1955 street directory and turned to the page with our block. On the south side, from east to west: Atkinson, Shaw, Ringer, Studhan, Doherty, Mittlek, Stephen, Chylinski, Gilliat, Peer, Hamilton, Shoults, Petterson, Bannerman, Wardrope, Webb and Daly. One winter Joan Webb was carnival queen at the Crescentwood Community Club, although her younger sister, Dot, I thought was the wickedest beauty in the world. I traded comic books with the girl at the Petterson's. I loaded firewood down Mr. Shoults' basement. On the north side, from east to west: Palk, Kelly, Sentin, Sutherland, Morrison, Wilson, McKinnon, O'Malley, Sweatman, Batenchuk, Reinheimer, Clark, Schwob, Donaldson, Clubb, Pankiewicz and Robb. Mr. Wilson fought with the Scottish Highlanders, and one night in his basement workshop I asked him if he had ever killed anybody."You should never ask a man that," he said. I thought the oldest Palk girl was the wickedest beauty in the world.

Dad built a birdbath in the backyard by nailing a garbage lid upside down on a wooden post. I'd start sleeping on the back balcony in early May and try to keep sleeping out there as long as I could. One year I made it to Halloween. Dad bought the house in 1938 for $4,000, paid it off in the early 1950s. Mom fell down the stairs when she was pregnant with me and banged into the radiator in the downstairs hallway. The family alarm clock was on a bureau in the upstairs hallway, and every night Dad would ritualistically wind it and in his gruff, managing editor's voice sing, "Toora-loo-ra-loo-ra ...."

"What did you think of the place when you first moved in?" I asked Mom when I realized I had never asked her that.

"The rooms were so small," she replied. "If we had people over in the living room their knees would nearly touch."

Small? Funny how the past seems so immense. How did I manage world wars on the living room rug? How did we manage to get *everybody* in there for Christmas Eve? My house in Toronto must be half again as big as 1033 McMillan Avenue, but I know I will never believe it.

Monday was all work. Dan arrived early, and we began carrying out furniture, stacking it on the boulevard, piling it into the trailer. Then we would go to the end of the block, turn up the back lane and drive the block and a half to the new apartment. I became merciless. Perspiration cuts right through melancholy, and if there was any doubt, I threw it out.

Why bother? A Grade 8 report card — who cares? A 1957 *Maclean's* magazine — so what? We keep so many useless things, and the best they ever do is bring back a momentary recollection, invariably sad and even hurtful, the worthless barnacles of memory which only serve to clutter items that really do matter. (When I returned to Toronto I set about on a major housecleaning project, throwing out bags of junk I once thought I might someday want. Out!) It reminded me of E.B. White's essay "Good-bye to Forty-eighth Street," in which he wrote: "A home is like a reservoir equipped with a check valve: the valve permits influx but prevents outflow. Acquisition goes on night and day — smoothly, subtly, imperceptibly." And, when he writes of trying to rectify matters, he says: "I am impressed by the reluctance of one's worldly goods to go out again into the world. During September I kept hoping that some morning, as by magic, all books, pictures, records, chairs, beds, curtains, lamps, china, glass, utensils, keepsakes would drain away from around my feet, like the outgoing tide, leaving me standing silent on a bare beach."

While we were moving the heavy furniture and setting it up in the apartment, Mom cooked a Thanksgiving turkey in the oven of the family home. At the end of the day, we carried the turkey to the apartment and celebrated Thanksgiving there. It seems a heartless rebuke to the old house, to deny it that last Thanksgiving dinner, but at the time it was oddly appropriate. Just as we left, the kitchen light flicked off on its own, as if to tell us, 'G'wan, it's okay."

Two days after Mom announced she was selling the house news came that *The Winnipeg Tribune* had folded. That was Dad's newspaper, where he worked for 43 years, and the one that published my first by-line. The selling of the house and the folding of the Trib, coming so suddenly, were like the rash, reckless — but perfectly ordinary — act of a child flipping up a slate-board and in an instant obliterating all that was on it.

After dinner I drove to the house, stopped in front of it, then worked up the courage to go inside one more time. All was dark and cluttered, and hardly a trace of us was left. □

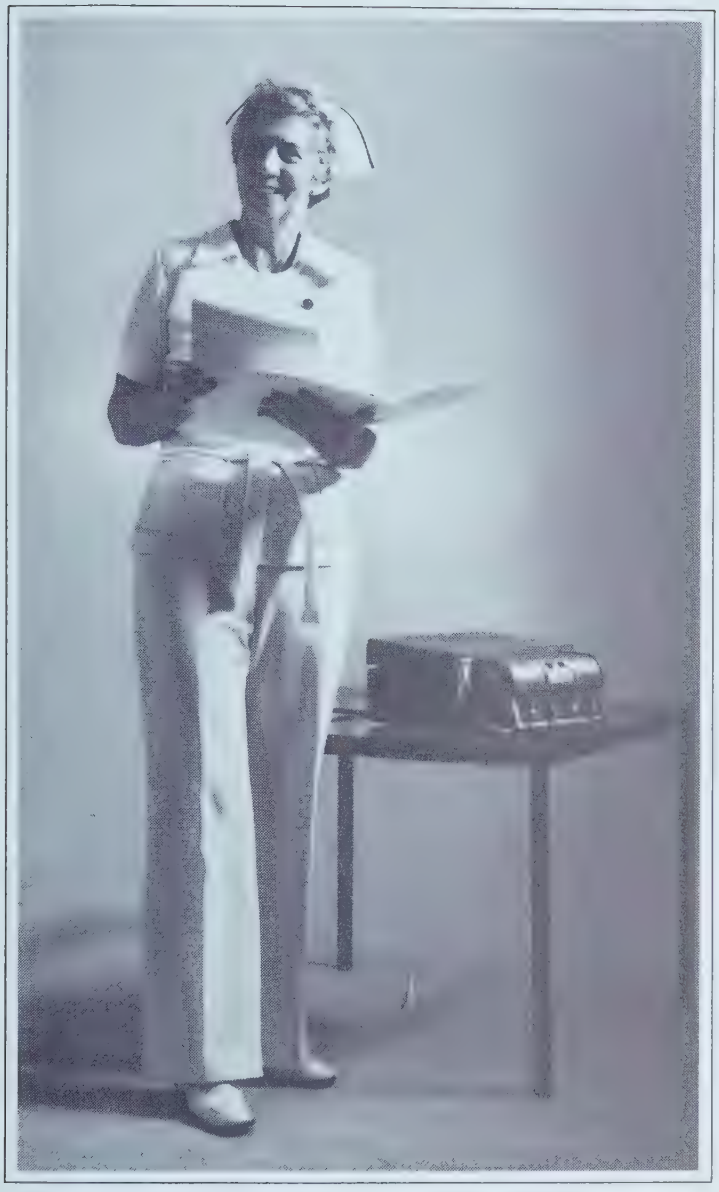
DOCTOR IN THE HOUSE

A short history of occupational medicine

BY ANTHONY TILLY

PHOTOGRAPHS BY PETER CROYDON

The principles established in 1947 by Imperial's first medical director, Dr. Russell Birrell, are still followed today



In a corporate medical department, the nurse may also be an administrator, as in the case of Irene Robertson

Occupational medicine is not a static discipline, says Imperial's medical director, Henry Shewchuk

ONCE it was simple. Philosophers thought that air, fire, water and earth were the fundamental elements. Physicians concluded that blood, phlegm, yellow bile and black bile were the corresponding "humors" or body elements. When illness struck, the doctor's job was to concoct a remedy to restore the natural balances of the humors.

Ancient Greek science seems quaint and childlike today. Now chemists work with more than a hundred elements plus many more natural and man-made compounds. And physicians use knowledge as far removed from the four humors as modern chemistry is from the four elements.

Despite our many medical advances, however, some real challenges remain. In fact, our technological advances have themselves created new challenges. Today Canadian workers must be protected from dust, noise, toxic chemicals, severe stress — all of the possible by-products of modern industrial processes.

In this century Canadian businesses and physicians have attacked these challenges through a new discipline known as occupational medicine. Their shared goals are, according to Dr. Jack Fowler, a retired director of Imperial Oil's medical department, clear cut: "The purpose of occupational medicine is to preserve the health of employees and prevent damage to it." Adds the current medical director, Dr. Henry Shewchuk: "It's far from being a static discipline. It evolves to take into account new issues in industry and new needs among employees."

Looking back from the 1980s we can see three stages in the history of Canadian occupational medicine. Each stage has brought the professional closer to the preventive goal that Fowler describes.

The pioneering stage spanned the first half of this century, during which a small number of Canadian companies decided that new employees should be given medical examinations to detect any past or potential problems; they arranged for local general practitioners to

conduct those examinations.

Imperial Oil started such a program in 1919. The key figure right from the start was a Toronto physician, Dr. Austin Evans, who as a ship's doctor had firsthand experience with cholera, yellow fever and bubonic plague, and with wartime and peacetime service. Dr. Evans was an energetic man who kept up a demanding schedule when he started his new job. In the mornings he worked at Imperial's head office. In the afternoons and evenings he ran his family practice. And in the evenings he also turned to his hobbies: philosophy, ancient Greek and medieval Latin.

Evans' many interests did not prevent him from making an important contribution to the development of Imperial's medical history. As well as conducting physical examinations, he coordinated the company's medical work across the country. In addition, he developed precedent-setting policies, such as a tuberculosis program that provided individual care and family financial support.

Austin Evans and other part-time industrial physicians (as they were then called) continued their work throughout World War II. But once the war was over, Canadian occupational medicine was set to move to its second stage. Part-time staff could not perform the expanding role; full-time medical departments were the best answer.

Along with a few other Canadian companies, Imperial Oil made this switch directly after the war. In 1946 Dr. Russell Birrell, a soft-spoken Canadian with experience in China, Peru and the United States, went across Canada on behalf of Imperial to study the company's needs. Birrell concluded that Imperial needed a team of specialists and a more comprehensive medical program.

A year later, in 1947, that team was announced in *The Imperial Oil Review*. The magazine's October issue carried "Action for Health," an article that explained and pictured the new department's services for employees. That same year Dr. Austin Evans — who had served Imperial for roughly a quarter of a century — reached retirement age, and Imperial's management announced his successor. Russell Birrell was named director of the expanded medical program.

Today — 20 years after his retirement — Birrell still keeps in his Toronto home his notes on the early years of Imperial's medical program.

At Imperial there are now 18 physicians serving the company's employees, eight of them full-time, plus 28 registered nurses and a number of technicians and hygienists. There are regional health centres — which include diagnostic and examination facilities — in six Imperial locations and smaller ones in a number of other company offices, refineries and plants. All told, there are about 90 persons engaged, full-or part-time, in the company's medical work.

Obviously employees who visit an Imperial medical centre for either a minor ailment that occurs during the working day or something more serious are assured of sound advice and, almost as important, trust and confidentiality. Back in 1947 when he became medical director, Dr. Russell Birrell realized that occupational medicine had to respect the age-old medical code of confidentiality.

Trust was essential, for the new medical program was designed not just to monitor physical health. Imperial chose physicians who were not only skilled and experienced practitioners, but also people who could offer a willing ear to emotional problems without any threat of relayed reports. One of these

Full-time medical departments were the best answer

physicians was Douglas Warren, who took charge of Imperial's Sarnia medical office and later went on to other roles in occupational medicine, including teaching at the University of Toronto and acting as a medical services consultant to business organizations.

Warren emphasizes the importance of the additional services. The physician must be aware, for example, that long-term disabilities or struggles with alcoholism involve social, family and financial problems. The employee needs understanding from a physician who, in Warren's words, makes sure "nothing is simply overlooked."

Yet for all that thoroughness, a physician at Imperial — or any other corporation — is not intended to replace the family physician. He or she is there to help maintain the level of good health in the company by giving attention to both the individual and the working environment. At Imperial, for example, the medical department is an enthusiastic advocate and supporter of the company's plan whereby employees receive financial help to cover the costs of fitness programs, provided their programs meet approved standards. But Imperial physicians have never been there to intrude on the work of other medical doctors. "We're there to supplement your own doctor's work," Henry Shewchuk, today's medical director, will tell employees. "When it comes to an ongoing medical issue, your own doctor — who knows your medical history — is the person who should treat you." But the company physician can offer an important supplementary service, explains Dr. William Hogg, medical services director in Sarnia. "A large part of our work is health education, and most of this is done on a one-to-one basis between the doctors or nurses and employees in the course of medical examinations or health-centre visits. We have time to answer questions. We can relieve a lot of worry just by making information available."

Over a quarter-century ago Imperial was the first private corporation in Canada to take a deliberate step toward more expertise in industrial hygiene. In 1953 the company hired a professional industrial hygienist, John Johnston. His role was a large one: to monitor noise, dust and other potential hazards in all of Imperial's locations across the country.

Regional physicians, registered nurses, an industrial hygienist — these, then, were some of the health professionals who made up Imperial's medical team when occupational medicine developed dramatically in the years just after the war. One occupational physician who recalls that period of development is Dr. Walter Prendergast. Years ago Prendergast had an amusing connection with Imperial's medical department. When Birrell was director, Prendergast was a medical student. One day in the late forties he was ushered around the department's offices by his father, who was then Imperial's assistant to the president on public relations. Prendergast

Imperial's medical system includes six regional centres, staffed by professionals such as nurse Mary Bliss

A large part of the department's work is health education, says Dr. William Hogg of the Sarnia medical centre

chuckles over his tour. "I think," he says, "Dr. Birrell might have been wondering whether he was going to have me thrust upon him."

That didn't happen. Prendergast gained experience with several companies and today is company medical officer for Eaton's. His office is a study in contrasts: an old rolltop desk (reputedly Timothy Eaton's) sits in Toronto's modern Eaton Centre. From that vantage point Prendergast looks back on the development of health services in a company quite different from the one in which his father worked. Eaton's medical services have long been designed with the business's special requirements in mind. For example, because the company's stores are visited by thousands of people every working day, the medical department has to be responsive to the needs of customers as well as employees.

In the years while Imperial, Eaton's, Bell Canada and other Canadian companies developed medical programs suited to their businesses, occupational physicians regularly gathered to discuss shared concerns. The physicians were concentrated in Quebec and Ontario, so they held their annual conferences in those two provinces in alternating years. Today over a hundred men and women practise as full-time occupational physicians, working in every province. Now, when they meet once a year they come from all over Canada, bringing with them the concerns of almost every business known to Canadians. Says Imperial medical director Henry Shewchuk: "This kind of cooperation among occupational physicians has been crucial to the development of the field in Canada."

One of the major issues facing occupational physicians was the growing concern that long-term exposure to certain substances could be dangerous. But how long an exposure? At what level? What were the consequences? When would they appear?

Corporate medical departments already had some means for monitoring these concerns. The regular examinations at Imperial — every year for those over 45 — and other companies provided one such

control mechanism. They were designed, as Henry Shewchuk says, partly as an early warning system: "We hoped to identify the earliest indications of a problem even before the individual recognized it."

But these examinations could not reveal consequences that could be delayed for years or even generations. So occupational medicine undertook mortality studies that would try to untangle the many variables — including type and degrees of exposure, smoking habits, family history and ethnic group — that could all account for higher rates of cancer, heart disease and other potentially fatal diseases. These studies required the skills of doctors, hygienists, statisticians and computer programmers. They also required laborious and difficult follow-up on former employees in order to relate numbers and causes of death to the suspected variables.

Numerous companies in almost every industry have begun to carry out such intricate and detailed testing. The proliferation in testing is only one of the many indications of the huge amount of research being done in occupational medicine. Another is the number of publications in the field. The library in the Ontario ministry of labor now receives more than 200 journals and newsletters dealing with occupational health and safety.

That surge of concern about health in the workplace occurred when there was still little legislation in the field. Since then Canadian governments have moved occupational medicine into its third stage: an era of extensive legislation and regulation.

Every province, for example, now has industrial hygiene requirements along the lines of those that Imperial Oil developed on its own. These standards are regulated by various ministries and agencies: labor and manpower in Newfoundland and New Brunswick, labor in Ontario, Manitoba and Saskatchewan, worker's or workmen's compensation in Prince Edward Island, Alberta and British Columbia; public health in Nova Scotia; and environment in Quebec. And just as the agencies vary from province to province, so do the regulations and standards themselves.

The government, the medical profession and private corporations have all developed methods to cope with the sudden explosion of complex and extensive legislation. Recognizing that more than 400 groups are doing fieldwork without coordination, the federal government has started the Canadian Centre for Occupational Health and Safety. The centre's assumption is that effective solutions can be found through cooperation.

At Imperial Henry Shewchuk sees continuity rather than sudden changes. As the fifth director of the medical department, Shewchuk considers the government's requirements in light of the control system established by his predecessors, Drs. Russell Birrell, Gordon Sinclair, Jack Fowler and Cliff Preece. Shewchuk summarizes: "Before they became law, we were already fulfilling most of those requirements."

Of course the explosion of questions and answers about occupational health has affected the members of Shewchuk's department. The industrial hygiene division, which was run single-handedly by John Johnston in its early years, is now a team of eight staff members headed by Neil Murray.

One member of Murray's team, Gerald Saunders, comments that a major part of his job now is to keep up with the vast proliferation of information: "I just literally can't read everything that's being published right now."

Dr. Jean-Paul Couture, director of medical services for Quebec, agrees that staying abreast of developments in occupational medicine is a problem. As past-president of the Quebec Industrial Medical Association, he has been involved in setting up courses for association members in cooperation with Quebec universities.

An era of extensive legislation was beginning

Couture's initiative is not unique. To the surprise of some skeptics, physicians at Imperial are far from being deskbound. In 1977, when Arnold Katz left seven years of private practice to join Imperial, there were a few former colleagues who wondered if he might find the work too routine and perhaps too restrictive. But, says Katz, it hasn't been that way. During the spring of 1979 he joined the crew of an Imperial tanker, the *St. Clair,* to get a feel of life aboard and a sense of the demands that marine work places on Imperial's men at sea. Then, late last year, he took part in a give-and-take session with a council of the marine group in Dartmouth, hearing their concerns and giving his answers about health upon the seas.

The system that Russell Birrell established in 1947 assures, according to Arnold Katz, that "we can act very independently of other considerations to make sure our handling of the employee is of the highest calibre." Nor is the work routine. In fact according to Katz, the challenge to anticipate problems before they occur is "the most stimulating type of work I've been involved with." For example, back in October 1979, with the support of the medical department, Katz set up sessions to help head-office people stop smoking.

In an effort to go beyond the counseling services that many physicians have long provided, some corporations are moving toward a new method of helping employees to cope with social and emotional problems. Imperial is one of them. Last year it created a pilot project called the Employee Assistance Program. When Dr. Sam Klarreich came to Imperial to carry out this pilot project, he became one of the first clinical psychologists to work in a Canadian corporation's medical department. He expected to develop his role gradually — lecturing on stress, writing articles for company publications, slowly building the trust and exposure that would bring employees to him for counseling.

But the program hasn't had that gradual buildup; it's been active right from the start. Klarreich goes on to offer his explanation: "People — because they're people and they're living in this often troubled world — have problems mainly related to living, styles of living, relationships and breakdowns in relationships. More and more, such people are grateful to have someone who'll give them some professional help."

Is this help just a fringe benefit, a needless extension of the idea of occupational medicine? Klarreich doesn't think so. He argues that "some people refer to it as a must" and then adds that the employer benefits when the employee does. If

Concern over possible dangers to workers created a demand for industrial hygienists such as Neil Murray

When the employee benefits from counseling, so does the employer, says Sam Klarreich, staff psychologist

clinical psychologists can help reduce absenteeism and other costly symptoms of social and emotional problems, such benefits are substantial.

Klarreich's program is still in its pilot stage, so it is only natural that he has spent some time in its first year evaluating his accomplishments and suggesting new directions. But it is worth noting that occupational physicians, at Imperial and elsewhere, have also recently reviewed their progress, made changes or planned for new developments in the future.

As 1981 began Dr. Douglas Warren, now Canadian medical director of Occidental Life Insurance Company, continued to work on behalf of the Canadian Board of Occupational Medicine, developing proposals to oversee qualifications in the field.

In the same month, Dr. Walter Prendergast was considering Eaton's plans for more than 25 new stores that could be built over the next five years, considering the medical aspects of the proposed stores, including lighting, heat and air quality.

January 1981 also saw changes in Imperial Oil's medical department. Dr. Henry Shewchuk announced a shift that gave Dr. Arnold Katz administrative responsibility for the department's activities in the Ontario region, while Dr. Diane Dahlman took up the same position in the West. Elsewhere in the department, the industrial hygienists were adjusting to other changes. Neil Murray and his colleagues were assimilating the latest regulations from provincial and federal jurisdictions.

Meanwhile, in his Toronto home Dr. Russell Birrell was reading the latest issue of *Pulse*, an employee newsletter about Imperial's medical department. In the two decades since his retirement in 1961 much had changed. The names were different; Shewchuk, Katz and Saunders were all new in Birrell's terms. The department had grown considerably.

But despite these changes the underlying continuity was clear. In 1947, when Canadian occupational medicine was still a very new branch of modern medicine, Russell Birrell had developed specific principles and objectives. They are still followed today. □

In Closing

Every year about this time, just a bit past the middle of May, I remember a spring afternoon almost 30 years ago, when I arrived by train from the Maritimes in a village near the centre of Saskatchewan, called Crooked River. It had once been a lumbering town, but by the time I got there it was a dreamy, quiet place where people recalled the days, as late as the forties, when the mill was booming and the street filled with lumberjacks from all over Canada. Now it was lying in the pale prairie sun, its dusty street and the frame buildings that lined it like snapshots from an old family album that would have had much to say if they could only speak.

I stood on the platform as my trunk and suitcases were taken off the baggage wagon and then stared idly as the men in the mail car swung the canvas bags down into the back of an ancient black pickup truck, so ancient its wheels had narrow tires with spokes on which the mud had caked and dried. The driver, an elderly man and the only other person on the platform, observed this ritual, then stood back wordlessly as the train left him to the prairie stillness. Then, for the first time, he looked at me.

He was a slight man — perhaps 70 years old — with strands of thin white hair, bright gray eyes and a mouth that seemed set in a permanent smile. He was wearing a short jacket, khaki trousers and a pair of knee-high boots. He closed the door of his truck and approached me.

"Are you the minister?" he asked.

I said yes, I was, for I had come to Crooked River, like hundreds of other young Maritimers to hundreds of other prairie villages, as the student minister. While we were not ordained — and were therefore not expected or permitted to give the sacraments or perform marriage — we were assigned for the summer months, once classes ended, to tiny, usually scattered congregations that could not support a full-time minister but which were grateful to have a student who could take services, visit the people and in general keep the church open a few months.

"You're a day early," he said. "I thought you were coming tomorrow."

I was about to reply — though I had no idea what explanation to offer — when he shook my hand warmly and gave his name. He was, it turned out, the man who, summer after summer, had welcomed countless student ministers to Crooked River and become for all of them a kind of mentor, who saw them through their early uncertainty with a combination of patience, humor and, most of all, common sense. He gave his name as Mr. Green, and that was the only way I ever addressed him.

Together we heaved my belongings into the back of his little truck, dropped off the mailbags at the post office and then lurched along to the place that was to be my home for the next few months. It was a one-room cabin, standing on cement blocks and set amid alders just behind the small church in which, each Sunday, I would conduct the service before heading off by bicycle for the afternoon service in an even smaller church, which, depending on the wind and mud, might take an hour or two to reach.

We put my trunk in the cabin — in which there were a table and chairs, a cookstove, a sink, a bed and two hanging light bulbs — and

then, smoothing his few strands of hair, Mr. Green said that I should leave everything and go along to have supper with him and Mrs. Green. "Come along," he said and then added a phrase I was to hear many times during that summer in Saskatchewan. "Come along and make a meal."

For a youth from the Maritimes who had never been beyond them, the meals with Saskatchewan families were, it seems to me now, the most enduring memories of the summer and in some ways perhaps the most revealing ritual. There, seated at the massive tables laden with six bowls of vegetables, seven different kinds of pie and surrounded by men, women and children whose names were not Scottish but usually Polish or Ukrainian, a young man could really come to realize the diversity of Canada. Until then my world — physically and emotionally — had been the Maritimes and the heart of that world Cape Breton, so that no matter where I went, someone had been to my hometown and, in many cases, knew someone that I knew — someone named MacInnis or MacDonald or MacIntyre. Now no one knew anyone I knew. The familiar symbols were gone, and I had to find my way among new ones. Once, a man who had come from the Ukraine years before to homestead, and whose hands were as large as his goodwill, was told I came from the Maritimes and said that because of that he had a question he wanted to ask me: Had I ever seen Don Messer? (I had to confess I had not, but tried to recoup by saying I had a friend who had once been in the same room with Hank Snow.)

Almost every afternoon, after I had spent the morning working on the sermon for next Sunday or talking politics in the front yard of Mr. Green (who told me many times that the greatest of our statesmen was Mackenzie King), I would climb on my bicycle and begin making my rounds. It was a practice that seems a bit old-fashioned today, visiting the members of the congregation. Sometimes they were farmers out in the fields, sometimes young people who were drifting through the summer and whom I enlisted to paint the community hall, or the people who appreciated it most of all, the very old, who, sick or well, seemed to feel that a call from "the student," whoever he happened to be, was an event on their summer calendar to be looked forward to with honest pleasure or just plain curiosity.

One day at noon, along about early August, I was sitting at the table in my cabin, the hot, dry breeze barely stirring the curtain, when I heard a knock at the door. It was a man I had never met before, medium height, about 30, quite dark, with a look I took for charm but now, so many years after, am more inclined to describe as cunning.

"Father," he began, "I have a small problem. I'm passing through town on my way to a job, and I've lost my wallet. Every cent. If I could borrow just three dollars, I'll pay you back next week with my first pay." Immediately I handed him three dollars, whereupon, with the timing of a true professional, he smiled and said, "Father, I was actually going to ask you for six." So I gave him another three.

I told Mr. Green about it that afternoon. I've always been glad that he did not laugh. He simply smoothed his strands of hair in that familiar way he had when he was about to make a point and said: "It's a good thing to care about this world, but it's also a good thing to be wise to it. Next time one of those fellas asks for money ask him to spend a couple of hours chopping some wood for you. If he chops the wood, then you send him to me and I'll pay him." He spoke with the confidence that came from knowing he would never have to pay.

In the last week of August, in the same truck in which he had met me, Mr. Green took me to the station and I left Crooked River, though in some ways I like to think I have never left it at all. There must be thousands of us in Canada who went, as I did in youth, from the East to the West, each to some Crooked River of his own, and felt something of newness and vastness, and something of what it is to pass from being a youth to becoming a man. Now, as the country faces large questions about East and West, I find myself remembering Crooked River again, not just because it was so much a part of my maturing years, but because it gave me, for the rest of my life, a gallery of unforgettable characters.

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'TIS THE SEASON...

THE WALKER'S WAY

Through snow and sleet and summer's heat...

BY ROBERT THOMAS ALLEN©

One Saturday morning a while ago I watched a whole family, with a poodle, jog past my apartment balcony (the poodle wasn't exactly jogging; it seemed to be gliding along on tracks), and a little later a girl of about eight, in a red track suit, trotted past, pigtails flying, accompanied by a man on a bike — her father, or trainer, or agent — and I started wondering if anybody just goes for a walk any more. Walking used to be a part of life, a kind of morality and a sign of strong character, like keeping your pants pressed or paying your debts.

"That boy is a great walker," a woman would say with admiration and approval of some neighborhood youth, as if thinking he'd make a good son-in-law, and she would say the same thing of some plump, bald, bachelor brother of 50 — "Willy loves to walk" — as if finding it hard to understand why he hadn't been snapped up by some woman with a sound sense of values. Doctors prided themselves on walking to see their patients in all kinds of weather, and I can see our family doctor yet, coming up between the drifts, wearing a gray Persian lamb hat and a pince-nez and a Kaiser Wilhelm mustache. He'd stomp the snow off his feet in the vestibule and come up to the bedroom and tap your chest with long, cold, clean fingers, smelling faintly of chloroform, and say, "There's nothing much wrong with that boy," and tell my mother to rub some Sloan's Liniment on my chest, give me some hot lemonade, wrap my neck in red flannel and keep me in bed for the rest of the week, leaving me with the delightful prospect of sitting there at the bedroom window, smelling of liniment and watching the kids go down the lane to school. "I hear you're a great walker," the doctor would say on the way out to my father, who would be waiting at the bottom of the stairs.

ILLUSTRATION BY JAMES HILL

RICE COLLEGE

My father was one of the great walkers of the neighborhood. He walked downtown to his job as a jewelry repairman and back again every day, including Saturday. He came up through Riverdale Zoo, where I'd sometimes go to meet him, maybe as he was passing the polar bear cage just before suppertime on a summer afternoon, walking with a long, loose stride with his knees bent, arms swinging or sometimes with one hand behind his back, wearing a black fedora, starched blue broadcloth shirt, blue pinstripe suit, vest, clip-on polka-dot bow tie, watch fob and black Eatonia shoes. In winter he added a topcoat and a sage-green wool scarf and wool gloves and rubbers. He'd arrive for supper in zero weather or in a blizzard with his glasses steamed over and his face pink and happy, exclaiming over the pleasure of breathing clear, cold air. "That's just like taking a glass of wine," he'd say to my mother, who was always trying to get him to take the streetcar like normal men.

Some of my own most pleasant memories are of winter walks: one in Vancouver, after a heavy, soft snowfall, when I left my hotel early in the morning and the whole city seemed to have been left to myself and the stone lions outside the courthouse, which had white streaks down their noses. I saw one other early riser standing in a store doorway admiring the snow, who called "good morning" in that flat, intimate tone that voices have after a fall of snow or at a summer cottage in the evening beside a northern lake. And I remember the after-supper walks I took with a next-door neighbor, an accountant who loved going out in snowstorms. As soon as snow started drifting against the windows and piling up on the street, the phone would ring. "Do you want to go for a walk?" Our wives would watch us out the windows of our living rooms as we disappeared down the street, like two figures from *War and Peace*.

One of the few times I've been on TV, when I was put up at a midtown hotel in mid-February, I used to go for walks at night along old streets where you looked up at high, narrow peaked houses through a lacy pattern of bare branches. There was a bookstore with an outdoor bin and a box to put your money in, and it was very pleasant standing in the doorway on a sloppy, restful winter night reading bits from books that had been part of my life —*The Cloister and the Hearth* ("Not a day passes over the earth, but men and women of no note do great deeds") and *Vanity Fair*, reading again about Becky Sharp throwing Doctor Johnson's lexicon over the garden wall of Miss Pinkerton's academy for young ladies ("So much for the dictionary") — the pages dimly lit by the faint reflection of the neon lights of the topless bars one street over. And I remember when I was a kid going for a walk Christmas night, knowing Christmas was over for another year and enjoying the feeling of peace and serenity, maybe a dog barking over on Arundel Avenue (a sound that, at a distance, is strangely melodious and melancholy).

The last time I walked up that part of the street on a winter night was when my father was in his mid-eighties, and while I was wondering how he was, I heard the soft *c-r-r-r-um-p!* of a snow shovel and saw him, the only moving shape on the dark street, shoveling his sidewalk. He enjoyed all the seasons and everything they brought. He enjoyed the heat of summer. "You wouldn't feel the heat nearly as much if you stopped thinking about it," he'd say to a woman neighbor who sat on her veranda fanning herself and who would look at him as if she would have liked to kick him. He took my brother and me on wonderful long walks out into the country in summer, into an enchanted world of bobolinks and the sound of wind in the pines and sunny, silent country roads.

Sometimes when he was walking to work, a neighbor who owned a car would pull up to the curb and call, "Hop in. I'll drive you downtown," and my father would say, "Thanks very kindly, but I'd miss my walk." "Hop *in!* I said I'd *drive* you," the guy would say, figuring that my pop hadn't heard what he'd said. My father was still going for what he called "a good stretcher" every day when he was in his mid-nineties. He had no use for cars. If my wife and I took him for a Sunday drive, the only thing he enjoyed about it was the chance to visit with us. When we dropped him off in front of his house he'd stand there on the sidewalk beaming with pleasure at not having to sit in a car any more, wriggling his shoulders and waving his arms and making joyful sounds at being able to move again. "Eyeeeeagh! Now for a real stretcher."

Driving, during the early days of the automobile, was considered slightly immoral and a sign of decadence. "*Drive?*" someone would ask, if you suggested, say, taking the family car four blocks to pick up a brick of ice cream. "What do you mean, *drive?*" It's a feeling I never quite got over, and sometimes even now when I head for the car to drive six or seven blocks to a shopping centre, I catch myself having vague guilt feelings, as if I've lost all my moral fibre. When we got our first jobs we went for long walks during lunch hour. Occasionally you'd meet some workmate from the office, looking somehow different than he did in the office, his coat collar turned up, wearing gloves, maybe leaning over a bridge or looking into a pawnshop window at things like kettle drums, gram weights, World War I helmets, spy glasses, jeweler's eyepieces and stuffed owls. We walked home from work to save money. Now and then when I see some young fellow stepping out briskly, I can't help feeling that he's been working overtime in Eaton's linen department and is late getting home (like, say, 50 years) and is walking to save the seven-cent carfare and add it to the 35 cents he saved on his supper money by having lamb stew for 15 cents at Bowle's Lunch and that he's saving to marry some nice, plump girl in the mail-order department.

It's hard to believe now, but we used to take girls for walks. You'd step up onto a dark veranda on a murky night in an unfamiliar part of town six blocks south of where you lived, give the doorbell a twist, and when it was answered by some girl you'd met last Saturday night at a houseparty, you'd touch the brim of your hat and say, "Would you like to go for a walk?" "I'd love to," she'd say, if you were lucky. "Wait till I ask my father." We promenaded along Danforth Avenue Sunday evening after church and along the lakeshore boardwalk at Sunnyside on the first bright, cold Sunday afternoons of spring, our knuckles turning blue. A while ago I got a phone call from a man I hadn't seen since those days, and listening to that familiar voice from the past I was

back walking along the lakeshore on one of those frigid afternoons when the ice was still on the lake and we were stirred by vague longings and the girls were elaborately unaware of us.

I've noticed that people are beginning to regard walking when it's possible to ride as a bit unusual, if not downright odd. "She *loves* to walk," I heard a woman waiting at a bus stop say to someone she was with about a tall, red-haired woman who went by, striding along magnificently, leaning into the wind. "She walks home *every night!*" the woman said, with a kind of baffled admiration, the way she'd speak of someone who had, say, gathered a valuable collection of old radiator caps. Yet I hope people don't forget the pleasure of walking. I know that some of the best moments of my day are when I'm walking home from downtown along some familiar route: through Queen's Park, for instance, on a hushed and peaceful, soft and snowy winter night when the traffic sounds are muffled and even the occasional anxious car horn sounds a bit drowsy and the low clouds look like purple darning wool. There's one big oak tree near my path, and I always touch its rough and reassuring bark as I go by, like touching home base. And there's a picnic table I like to look at that, when the sun shines straight down on it, gives the feeling that it's at the centre of the universe and, I'm not sure why, always lifts my spirits — something about the way it sits there, sunny and quiet and secluded, as if it's dreaming of picnic baskets, three-legged races, cucumber sandwiches, babies, grandmothers.

One blustery, winter noonhour just south of this spot, outside the Bank of Montreal, I passed a tall, erect, distinguished, jaunty-looking man wearing a cap and long wool scarf, who gave me an amused sideways look as he went by, as if we shared some pleasant secret, and I realized it was Sir Ralph Richardson, apparently out for a walk in the blizzard (STORM PARALYZES CITY! TRAVELERS MAROONED!) before the afternoon performance at the Royal Alexandra Theatre, and as I watched him grow fainter in the swirling snow, until he disappeared toward the Parliament buildings, I imagined him saying lines like, "It is a far, far better thing that I do than I have ever done," or "J'accuse!"

There's a point during a walk, if it's long enough, when something tense and stiff-necked inside you suddenly melts and you become part of the world around you — a nice, drizzly, silent, foggy day; a hot, fragrant summer morning (NO RELIEF IN SIGHT! SCORCHER KILLS THREE!), when the cicadas are buzzing and the world smells of flowers, asphalt, earth, grass and warm spruce trees and reminds you of other summer days you've known, and you stop just to look at the sheer beauty of an old rusty railway siding, or the loveliness of a neglected lawn beside a Chinese laundry, blooming with dandelions and daisies, looking like the foyer to heaven — at least the way I've always pictured it.

There's nothing like walking to make you cheerful. Every Tuesday I go to a physical therapy class I joined after I'd had an operation and walk

around a big gym in the nurses' residence of Toronto General Hospital with about 40 other people, all of us happy and smiling and waving to one another and to the occasional jogger who goes by. We stop every five minutes to take our pulse rates and call out to a physiotherapist with a clipboard "Ninety-six!" or "One hundred and two!" as if it's the most fascinating thing you ever heard, then start walking again, our feet taking on a kind of life of their own, walking to music like *Sam the Old Accordion Man* and *Piccolo Pete* and *Amazing Grace* and heavy-metal rock renditions of Beethoven's *Pastoral Symphony*. I don't know who picks these tapes, but when you've walked a few times, fast, around the gym, you begin to enjoy them. You'll hear some guy screaming "BABY! BABY! BABY!" as if he's being dragged off to be executed and find yourself thinking "That's a catchy thing, that," and swing along in a cocoon of noise and rhythm. "Time!" the therapist calls and gives a few final stretching exercises, demonstrating by catching her right foot in her right hand and pulling it up behind her back absentmindedly, standing there on one foot like a lovely stork, watching us stumble and laugh. Then we shower and come out into the sunshine with our hair wet and shake hands and wish one another good luck till next Tuesday.

I still know a few walkers by sight, mostly people around my age, for example a man who comes down a street near my place from beneath some of the few elms left in Toronto, wearing Scotch brogues with soles about an inch thick, who last passed me with a friendly nod on a path in a field behind Loblaws one day when the first snow was beginning to whisper down onto the empty milkweed pods. I often see a white-haired lady in hot pants strolling beside the statue of King Edward VII in Queen's Park or past the statue of Queen Victoria, who sits there on her throne pouting, and a tall woman in a wide-brimmed hat who I like to think used to be in the chorus line of Flo Ziegfeld's *Follies*, walking past the ivied entrance to the cloisters and library of Knox College or strolling up a street were I go to buy pencils, in the garment district. (It's one of my favorite regions to go for a walk, particularly on a hot, golden August afternoon when there's a faint aroma of corned beef and pickles in the air, giving an extra domestic touch to those homey, gilt-lettered signs, such as Krengles Pants or Universal Buttons, that you see wreathed in the rustling leaves of dusty, downtown poplars.) She has that walker's look, as if experiencing a sense of freedom not far from floating, knowing she can walk in any direction, keep going right to Niagara Falls or Churchill.

I often walk out to the old district, down past the city farm where the zoo used to be, and usually stop to look at the cows, maybe stroke a cat, then cross the footbridge over a maze of buzzing expressways, past the site of the railway crossing — where there used to be a gateman who knew my father from seeing him walk past twice a day — then up the hill in Riverdale Park and along Danforth Avenue.

A while ago I had to go out there to see someone on a cold, icy, black, forbidding night, and I took the subway. But when I was finished with my appointment I went out for a walk, apparently the only person on foot in Toronto, or the world. Two young cops in a patrol car watched me with interest, as if thinking anybody out on a night like that wasn't just out for pleasure. But as a matter of fact, I was. I was in touch with fundamental things like cold, ice, silence, moving my legs and arms, breathing cold, fresh air, looking up through the bare branches of trees — things that made the world seem better, as it always seems when you're out for a walk. □

THE DISABLED

HENRY TREGILLAS

Helping those who help themselves: sighted companion accompanies skier Phil Crowson

Give them a hand up, not a handout

BY EILEEN PETTIGREW

Every Thursday evening Eleanor Matthews goes horseback riding through wooded farmland near Hamilton, Ont. Winter weekends find Phil Crowson cross-country skiing with thousands of fellow enthusiasts in the Cypress Bowl area of West Vancouver.

Their riding and skiing are more than casual recreation; they are enormous accomplishments. Matthews, confined to a wheelchair as a result of multiple sclerosis contracted nearly 20 years ago, was aghast when her physiotherapist suggested she consider riding with the Equestrian Association for the Disabled. It took great courage for her to agree to try. She had never ridden before, and the first time she was lifted into the saddle — knowing there was no strength in her legs — the ground looked terrifyingly far away. Now, three years later, she says: "When we ride the trails I don't even feel I have MS. My outlook has changed completely, just from being with people and doing things, and my balance is so much better that I even feel confident when my favorite horse, Molson, goes at a trot."

Riding is part of her physiotherapy program. She tries to exert pressure with her knees to guide her horse, but because of the lack of sensation in her legs, she is never sure whether or not she is succeeding. One volunteer runs in front and another on each side in case she falls, but she never has. "Once Molson stepped in a hole and went down on one knee. I was frightened, but I just flung my arms around his neck and hung on tight until he got up again."

Phil Crowson, totally blind since 16, skis with the Sons of Norway blind skiing program which the CNIB describes as the best on the continent. Since the group started six years ago, 75 blind people have joined, and every weekend, each accompanied by a volunteer instructor, they can enjoy the fresh air and exercise along with their sighted friends. Crowson has progressed so well that this year he came second in a 10-kilometre race held at the National Championships at Lake Louise, Alta. Annar Jacobsen, director of the program, was a skier from early childhood in his native Norway, and he and his fellow instructors derive great satisfaction from the time they spend with the blind skiers. "We get just as much pleasure as the blind skiers," he says. "It's a 50-50 proposition."

Going shopping, finding a job, renting a new apartment or taking a

vacation trip are all ordinary, everyday things to do for most people. For the approximately three million handicapped Canadians they are often impossible. People in wheelchairs have to deal with such architectural barriers as stairs, pay telephones that are too high to reach and air or rail carriers that do not accommodate wheelchairs. And, always, there are landlords and employers who are unwilling to take a chance. In this International Year of the Disabled, for which Canada acted as seconder at the United Nations in 1976, the picture looks brighter than it ever has. The government is studying a 130-recommendation report by a special committee on every aspect of the lives of the handicapped, with a view to implementing all or some of the changes suggested. As well, the federal government has assigned $1 million to fund projects that will help open doors and make the public more sensitive to the needs of the handicapped.

More, there is a new attitude among the disabled themselves; they are making it plain that rather than have things done for them, they want adjustments made to allow them to do things for themselves. It shows in a rash of new slogans: "Give us a hand up, not a handout," and "Don't help us out, help us in."

Stan Barker of the New Brunswick division of the Canadian Cancer Society feels that Terry Fox, the young amputee whose bold attempt to run across the country was cruelly interrupted by a recurrence of cancer, has had a lot to do with this surge in confidence. "Terry didn't see himself as handicapped, and now other people are saying, 'Let me do it myself, let me try.' Terry made them think, too, that if he wasn't ashamed of his artificial leg showing, why should they feel uncomfortable or embarrassed about their own differences?"

Many of the disabled say their biggest handicap is the attitude of the able-bodied. Len Seaby of Edmonton, who has only part of one arm because of a birth defect, travels a lot by air with his wife and infant son, Jesse. "When we go into the airport I manage the luggage, partly holding it under my arm and partly pushing it along with my foot, and my wife carries Jesse. As we stand in line at the ticket office people come up to my wife and say, 'Does he need any help?' Why can't they ask me directly?"

Seaby understands and appreciates that the questioners don't want to hurt his feelings, but still it rankles. "Take a chance," he advises. "Speak to disabled people. Maybe you'll be rebuffed, but on the other hand, maybe you won't. It's worth the risk."

Of the employable disabled people in Canada, it has been estimated that 80 percent are unemployed. Sometimes it's because they can't find a job, sometimes because they need training to equip them for the marketplace, and sometimes because it's physically impossible for them to get from home to the job. Tim Louis of the British Columbia Coalition of the Disabled says that between 3½ and five percent of the public is transportationally handicapped. "If municipalities could be persuaded to spend that percentage of their total transit budget on the needs of people who can't use regular public conveyances, there would be no problem," he says.

The city of Edmonton planned its Light Rail Transit System with these considerations in mind, equipping every station stop with elevators and

GARTH SCHEUER

Riding brings confidence for Eleanor Matthews

RICHARD FURLONG

Pat Rogers and her Elephant hardly ever forget

escalators. A new addition to the system is being outfitted in the same way.

In Charlottetown, P.E.I., a private citizen has taken on the transporting of the disabled as her personal project. Pat Rogers, a former library technician, works as a volunteer with St. John's Ambulance and frequently deals with requests to move groups of handicapped people around the island to conferences and meetings. "That ties up the ambulances," she says, "so I decided to buy a van myself."

So began the now-familiar Pat and the Elephant service. She had the brown and white Chevy van decorated with turquoise elephants and "by working on it myself, by enlisting the aid of neighbors, and by gish and by gosh," adapted the inside to accommodate four wheelchairs in the back and a handicapped person in the passenger seat. There is room, too, for crutches and Rogers' English setter, M'gog, who watches protectively over all and nudges her owner to remind her of regular stops.

On the road seven days a week from 8:15 a.m. until midnight, including Christmas and New Year's, Pat takes handicapped people to classes, to doctor's appointments, to church, to stores and to visit friends and family. Where they want to go, the van goes.

It's almost a labor of love for Rogers. Taking only a subsistence salary for herself, she makes ends meet with a subsidy of $2.60 per ride from the provincial government, donations from the public (she's now incorporated as a nonprofit organization with a board of directors) and the minimal $1.50 she charges her riders. "The $1.50 is important," she says seriously. "This business of coming back into society is a two-way street."

She sees her vans — a second was added in 1981 — as more than transportation. "We're helping to bring people out of their shells." She credits M'gog with providing a very special warmth. "I picked up a woman at the senior citizens' home one day; as she was helped down the ramp, she kept her eyes shut and she screamed without stopping. Calling M'gog over, I asked if she liked dogs. She stopped screaming at once and asked, 'Puppy?' With her hand on M'gog's head, she was happy and smiling the whole time. So many older people leaving their own homes have had to leave the family pet, too, and that's rough."

Working out of her own home on a demand-reservation plan, she takes calls on a bedside telephone from six in the morning. "I get a little owly when they call me at three a.m.," she says with good-natured resignation. Negative attitudes annoy her, and she finds humor in most situations. "People often forget to put the 'and' in our name," she says. "I get lots of calls asking if this is Pat the Elephant." Other people ask why she named her van the Elephant. "Because elephants are big, they're associated with circuses and joy and happiness, they are known for knocking down barriers in their way — and my elephant hardly ever forgets."

Walter Dinsdale, Conservative member of Parliament for the Brandon-Souris riding of Manitoba, is vice-chairman of the special committee reporting to Parliament on the problems of the disabled. He has more than a passing interest in the subject.

His son, stricken by a brain tumor at the age of 16, lay unhearing and unseeing in a Montreal hospital for a harrowing six months. At last medical authorities recommended Gunnar's discharge to what his father calls "one of those people warehouses, giving only custodial care — a pension and a shrug."

Lenore Dinsdale would not accept the verdict that nothing could be done for their son, and admission to the National Defence Medical Centre in Ottawa was arranged. With patient rehabilitative care, Gunnar came along to the point where now, 16 years later, he holds two degrees and numerous diplomas, lives independently in Brandon, Man., and supports himself as a special education teacher.

Gunnar's speech is a little hesitant, and his vision, hearing, balance and coordination are poor. But he has triumphed. "I'm supposed to be dead, supposed to be handicapped, supposed to be bedridden, supposed to be dependent. I'm not. The doctors said to me, 'Take it easy,' and I said to them, 'No.'"

There was a time when he lashed out at his parents, wanting to be left alone in his misery. Now he says: "They wanted me to get as much out of life as I could. They told me it was my show. They'd be there if I needed them, but they knew I could do it on my own."

The enchanting little clay figures known as trogs, found in gift and department stores across Canada, the United States and Bermuda, are all made by hand at the Claycrafters Workshop on a tree-lined street in Oakville, Ont. Mentally and vocationally handicapped adults are finding a niche in society for themselves while they learn work and social skills, some of them moving on into industrial employment while others stay on with Claycrafters.

Manager Maureen Taylor, who saw undeveloped creative potential in some of the people doing routine work at an adult training centre, proposed to the board of directors of the Oakville Association for the Mentally Retarded that they establish a satellite workshop. It grew into Claycrafters. "This is a bit like the old cottage industries," she explains, "except that we conduct the entire business from here. Our own people design our products, make them, market them through our retail shop and at gift shows twice a year, package them and send them out."

Many of the young people working with Claycrafters had finished school

and were sitting around at home, unable to find a job, lonely and with their morale at rock bottom. Lee-Ann Enger, 23, who moulds the tiny trogs by hand from locally purchased clay and puts on the finishing touches with a pin tool before firing them in Claycrafters' own kiln, is one who moved through the group home setting and then into an apartment on her own. "So many have learned to handle their own money — and their own lives," Taylor says with quiet pride. "They have blossomed."

In March this year 125 travel agents and other interested people from all parts of Canada and from Holland, England, France and the United States attended the Canadian seminar on easing the way for the disabled traveler. Boyd Hean of the B.O.S. Travel Service, which specializes in tours for the handicapped, finds the picture encouraging. "Airplanes now in the design stage will have accessible washrooms, and all aisle seats will have collapsible armrests so that the disabled person can move from a wheelchair easily."

To ease the difficulties of rail travel, VIA has hired a disabled economist to head a five-year, $16-million program introducing a wheelchair lifting service, pamphlets in braille and in large print, and a training program to help staff deal with the problems of the handicapped without embarrassment on either side.

The debate over the use of "disabled" and "handicapped" was settled in Canada with the decision that here the terms could be used interchangeably. "We were using up too much energy discussing it," says Jim Derksen, former coordinator of the Coalition of Provincial Organizations of the Handicapped. "Our American counterparts decided on 'disabled,' basing their conclusion on the World Health Organization's definition that a disability is a condition of being unable to do a specific thing, while a handicap is situational — a person in a wheelchair is not handicapped until he encounters stairs."

Whatever the term, it covers a broad range of difficulties including blindness, deafness, mobility handicaps, mental retardation and more. Problems associated with them cover an even wider ground.

Complete acceptance of disabled people — in the job market, in housing, in everyday commerce — is not going to happen overnight, but as more and more able-bodied people begin to understand the problems, barriers should come down. It was with this in mind that the Lucie-Bruneau Foundation developed the Accessibility Display in Quebec. Funded by the Canadian Organizing Committee, out of the $1 million made available by the federal government, and designed by wheelchair-bound professor of architecture Patricia Falta and her colleague, Petr Franta, it offers an opportunity to experience vividly some of the harassments the disabled encounter every day.

The visitor is settled into a wheelchair at the bottom of a ramp. After he has wheeled himself up successfully, he is confronted by a door which he must open alone and then close behind him. After rolling up an even steeper ramp, he spots a window — but it's too high for him. After so much exertion he may want to comb his hair; the mirror, placed for able-bodied people, is also too high. So is the telephone. A washroom entrance is too narrow for the wheelchair. Next, ready to leave a mock supermarket with his purchases held awkwardly on his knee, he must wait patiently at a turnstile until a clerk calls the manager to unlock and remove the centre post.

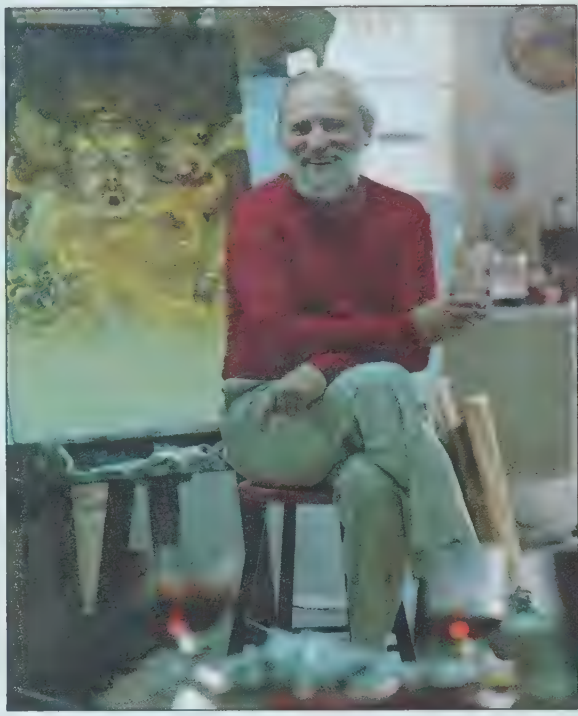
DANIEL WIENER

Quebec's Accessibility display puts visitors in the disableds' seat

"These are only some of the architectural frustrations experienced by the handicapped," says coordinator Ann Gagnon.

She has worked tirelessly to get the project under way, and she is delighted with public response such as the 100,000 visitors in four days at the Olympic Veledrome. Even more warming, she finds, is the contribution made by inmates of the Leclerc Institute at Laval. This group, calling itself Friends of the Disabled, got special permission from prison authorities to build all the components of the display from architect Falta's plans. When Accessibility moves to another town, as it has done all through 1981, the Friends of the Disabled dismantle it and load it onto an eight-metre truck provided free by Steinberg Inc., unload it at the new locale and set it up again. "And they do it with such love," Gagnon says.

Perhaps the most positive note in this International Year of Disabled Persons is that more and more handicapped people are refusing to believe that they have to sit at the back of the bus. They are determined to make their position clear to the rest of society and to find their own solutions to their problems. With goodwill on all sides they will succeed. □



THE FINE

BY DANIEL MOTHERSILL

We begin with the way things used to be. The setting is Toronto, the year is 1970, and for James Hill it is the end of long-distance calls, of flying visits to New York. A major contributor to American magazines, even while living in Canada, the winner of numerous art directors' awards and a two-time gold medal recipient from the New York Society of Illustrators, Hill has won a place in the pantheon of such greats as Maxfield Parrish, N.C. Wyeth and Norman Rockwell.

But the golden age of magazines in New York was ending. With the outlets for his work growing physically and fiscally smaller, some even disappearing entirely, Hill had decided to come home in an artistic sense.

On the day when our story begins, this dean of illustrators is sitting in the office of a young Canadian art director, who is clearly upset by Hill's presence. "What are you trying to pull?" the art director challenges. "James Hill is an American artist. What are you doing with samples of his work?"

Hill is baffled. "No," he says patiently, "I'm a Canadian illustrator."

Life has changed for this most painterly of Canadian illustrators. Hill's works, with their haunting qualities of light and shade, regularly grace this country's most important magazines, books and advertising campaigns. The awards continue. Ten years after his work came home, the Art Directors Club of Toronto gave him a special tribute as the acknowledged master of the illustrator's art.

But *plus ça change, plus c'est la même chose* — the more things change, the more they remain the same. Today, after more than 30 years as an illustrator and despite the admiration of the artistic community, Hill's name and those of other contemporary Canadian illustrators are far from well known. Indeed, given the high visibility and popular appeal of their illustrations, it is ironic that most people remain unfamiliar with the artists themselves.

For illustrators, it seems enduring public acclaim is hard to come by. As Steve Heller, art director of *The New York Times Book Review*, says with a touch of chagrin, "We have come to accept the notion that illustration does not have the same historical or aesthetic value as painting and sculpture." Artist Harold Town, a friend of Hill and a one-time

PETER CROYDON

James Hill — the dean of illustrators:
(far left) program cover for the National Arts Centre, 1978;
(left) "Birth," Homemakers, *1975;*
(above) "Out of Darkness," Redbook, *1964*

ART OF ILLUSTRATION

illustrator, put it more strongly a few years ago. He was commenting on a one-man exhibition by Hill at the United States consultate in Toronto, but his remarks could easily have applied to a number of Canadian illustrators. "I find it remarkable," Town said, "that his work is on display at the consulate, while artists who aren't good enough to carry Jimmy Hill's shoes have exhibits at museums and art galleries."

Hill remembers Town's comments as he shares a drink in the home of a friend. Despite his success he's a modest man, and he gives Harold Town's conundrum a good bit of thought. Then, blowing a great cloud of white smoke from his cigarette, he offers a partial explanation. "Illustration," he says, "is a relatively new art form, born with the advent of the magazine in the late 19th century. Since that time it has gone through some dramatic changes, and not all of them have been good." Then he gives a history lesson.

In the beginning, magazines and the great publishing houses that were built around them became the new patrons, succeeding both church and court as benefactors of artists and illustrators. Until the early 1950s books and periodicals were the predominant public entertainment. Consequently illustrators assumed an importance of unprecedented proportions. Their prominence, however, was short-lived.

Television was to overshadow the magazine. Its pervasive presence began to seriously affect the budgets of the most popular periodicals; and with the decline came a division, unfair and unwarranted, between art and illustration.

Back in the golden age of magazines, the twenties, thirties and forties, "Magazines were my art galleries," Hill recalls. "Publications like *The Saturday Evening Post* were filled with four-color illustrations, an inspiration to the continent's best illustrators. When I was growing up in Hamilton, Ontario, during the Depression, there weren't a lot of galleries. In fact, I don't think I was ever in one until I visited New York in the late 1950s."

The influence of magazines on the visual arts in Canada during this period was immeasurable. Every member of the Group of Seven, for instance, worked as a commercial artist while establishing a reputation

PETER CROYDON

as a painter. "Browse back through old copies of any major Canadian magazine," says Hill, "and you will find many illustrations by Canadian artists such as Oscar Cahen and Jack Bush." Most artists, however, used illustration only as a springboard. Most but not all.

It's been said that Hill was probably the first artist in Canada who started out to be an illustrator and remained in that field, putting his art into illustration. The first but not the last. Yet today the classic conflict between applied and fine art persists. Not so strangely, it is a conflict that exists more in the minds of the critics than among illustrators, for whom illustration is an equal form of art.

Consider, for example, Heather Cooper. At 36 she is the most financially successful illustrator in Canada. Toronto-based Burns, Cooper, Hynes Limited, the communications and design firm in which she is a senior partner, has won some 250 international awards for its posters, brochures and business campaigns. Cooper's personal accomplishments are also immense, with gold medals from such respected groups as the New York Society of Illustrators, the art directors clubs of Toronto and New York and a bronze medal from Czechoslovakia.

Her romantically intriguing posters for such institutions as the National Ballet and the Canadian Opera Company have become collectors' items. And so the line between fine art and commercial art becomes blurred, perhaps even irrelevant. "Cooper is an enormously talented artist," asserts art expert David Silcox. "She is working in a tradition that goes back to Aubrey Beardsley, Edward Lear and Toulouse-Lautrec." Like Lautrec, she's best known for her posters, a subtle blending of the sensuous and the refined. And like her contemporaries, Cooper has never believed that an artist is compromised because a work is commissioned. "If it has integrity, it's a work of art," she says, "whether it's done for someone else or for yourself."

But her current acclaim did not come easily. Cooper laughs at her pretensions in thinking herself trained as a commercial artist after a few high school art lessons. "After graduation I went around from studio to studio with life drawings and pretty watercolors, and the art directors would say, 'That's very nice, but we

Heather Cooper — fantasy, mystery and a merciless work ethic: (far left) design for Abitibi-Price Inc. direct mail campaign, 1974; (above) promotional poster for the University of Guelph, 1981; (right) cover for The Illustrated Child, *Jonathan-James Books, 1977*

can't use anything like that.' But if the school I went to didn't teach me commercial art, its students taught me to be tough."

It was a necessary lesson for any young illustrator facing rigorous competition and demanding clients. Cooper persisted and got a job as an apprentice at the graphic design firm of Hathaway Templeton, alternating between helping the designers on small projects and typing. "A month after I started, I was called into the boardroom and in front of all the staff was presented with a certificate saying I could type three words a minute. That ended my typing career."

She was taught package design, from brightening matchbox covers to decorating cereal boxes, and did bit illustration assignments whenever she had the chance. That continued for four years. Then came another year as a free-lancer. Then a partnership with designer Robert Burns in 1969, which cemented her business success, a success founded on a merciless work ethic (a typical workday stretches into 13 or 14 hours) and her evocative illustrations, full of tension and fantasy, foreboding and mysticism — illustrations that demand a response.

A strikingly intense woman, Cooper feels the catalyst for this appeal is an element of mystery in her work. "Mystery is to illustration what surprise is to writing. If I read something particularly haunting, it keeps coming back to me for years and years. It's the same quality I try to create in my illustration. I want people to remember; I want them to think."

The same observation, of course, could be made by many painters. Yet there is a distinction between fine art and illustration which can be summed up in one word — the intent. "The work," says Cooper, "must be pleasing to the public, pleasing to the client and pleasing to yourself. An illustrator doesn't create in a vacuum; the intent is to communicate to your client's audience. And for illustrators that's a positive force."

In virtually every region of the country, new illustrators are appearing, some seeking to follow styles used by established practitioners such as Heather Cooper, others working hard to give their work a new and individual touch. To cover the entire community of illustrators in Canada would take a volume — perhaps two — but the work of even

HENRY TREGILLAS

Marie Podbielski — not a profession for the timid: One Plus One's cover for Calgary Commerce *magazine, 1980*

Robin Arkell — even Michelangelo had a client: illustration for Pacific Western Airlines Great Canadian Adventures *travel brochure, 1981*

the few individuals mentioned below is a measure of the quality and diversity of illustration in Canada.

In a white stucco house with picture windows that frame the Vancouver skyline, Robin Arkell echoes Heather Cooper's view that illustrators do not diminish their art by working for commercial organizations. "The classic artists had patrons who dictated their subject matter," she explains. "The difference between commercial art or illustration and fine art is simply a matter of patrons. Instead of working for a cardinal or king who wants a portrait painted or a tomb decorated, you are working for a corporation or a magazine. Michelangelo's art didn't suffer because he was told what to paint or what to sculpt."

With that philosophy and a finely honed talent for drawing, Arkell in the last six years has built up one of Vancouver's most successful free-lance illustration businesses. It's not unusual for her to be working on four or five major projects at one time, for clients who range from McDonald's to MacMillan Bloedel to the British Columbia government. There are long days, often stretching into 24 hours straight, laboring over her pencil and watercolor sketches. "Deadlines are one of the major differences between fine art and applied art," she says. "If you take on a job, you get it done by a client's deadline."

And when the ideas don't come? "You simply work the problems over and over again in your mind. And that's especially true with watercolors. You can't cover up your mistakes the way you can with oil. The illustration must be done in your head beforehand, and to do that takes tremendous discipline developed out of experience."

Attractive, fiesty and blond, Arkell took a peripatetic route to learning her art, graduating from the Vancouver School of Art, studying lithography and photography in Mexico, working at Penthouse Studios in Montreal and free-lancing for several years in England. But with her apprenticeship over, it was time to return to Vancouver.

From those years of travel, Arkell learned two valuable lessons. One was about trends, the other about business. She explains: "They say that the golden age of magazines is over, but more and more specialty magazines are being started and more illustrations are being used. It's true

DANIEL WIENER

Bruce Johnson — no need for Canadian illustrators to feel inferior: "Dead Pigeon," an unpublished tribute to his son, 1980

that for many years photography has eclipsed illustration. However, trends are changing so quickly that it would be very strange if illustration in magazines wasn't rediscovered in a big way." And about business? "To succeed as an illustrator, you have to be as good a businessperson as you are an artist. In short, you have to be creatively tough." It's a lesson that a growing number of emerging young illustrators have learned quickly.

In Calgary, in a small frame house sandwiched between two apartment towers, 25-year-old Marie Podbielski sits in a blue-gray business suit hunched over her art board, preparing a composite drawing for a major developer. She works quickly, drawing clean, strong lines on the paper. "I'm just a farm girl from Prince Albert, dressed up in city clothes." And then she flashes a beguiling smile, making you feel that you've been taken, just a little bit.

But when the conversation turns to business, it turns serious. "This is not a profession for the timid; many don't survive," she says and then goes on to explain that being a woman has been one of her biggest assets in starting her art studio, One Plus One. "Most of my clients are men. A female in this business surprises them at first, and they assume that if I've gotten this far at my age, I must be more than competent."

A graduate from the Alberta Art College, she free-lanced for a few years, hired two full-time artists, renovated an old house and at the same time gathered clients and perfected her illustration.

Because of her need to compact a great deal of work into a short space of time, Podbielski uses a system of team illustration. "One of the illustrators might start on a rough sketch, I might do the layout and then turn it over to another illustrator to finish. It's a highly democratic way of working. For us it seems to work."

Bruce Johnson shakes his head, "Democracy in illustration — what next?" Johnson is one of Montreal's most successful and talented artists who, like most illustrators, sees his art as something highly individualistic. "It's a very competitive field. Only a minute percentage of the commercial art students who graduate will be successful as illustrators. But then people told me I'd never make it when I began 30 years ago."

Those people probably didn't realize that Johnson was the kind of

DANIEL WIENER

Andris Leimanis — creating art out of every illustration: scenes of Montreal, painted for private collections, 1980-81

person who believes in beating the odds. "If somebody says I can't do something, it just makes me more determined." That determination began early. At the age of 15 he went to sea and then joined the RCAF as an aerial gunner during World War II. Receiving his discharge in 1945, Johnson worked as an apprentice artist in a Toronto engraving house. Instead of attending formal art classes, he chose to learn at the drafting tables in commercial studios. In 1959 he married and moved to Montreal — for him a "genteel, gracious and flexible" atmosphere. He quickly established himself as a free-lance artist, illustrating for all the major Canadian publications and a variety of U.S. publishing houses.

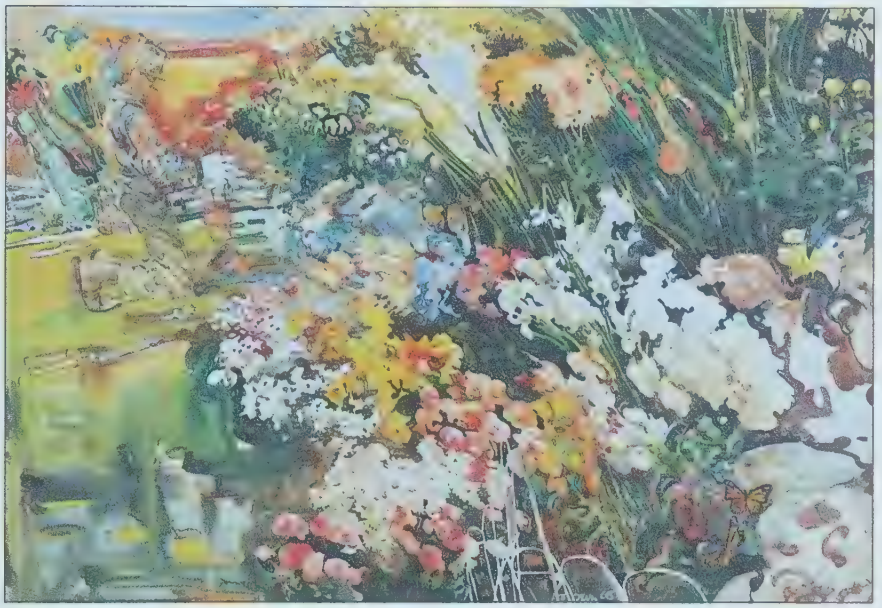
When Johnson is asked how Canadian illustration compares with work being done in other parts of the world, his eyes instantly brighten, his voice becoming excited. "First, much of the illustration that's being done in this country has reached the point of fine art. I'm not necessarily talking about myself [although he could well be], but there are countless illustrations being done right now that could hang in galleries anywhere in the world. Second, I think that illustrators like James Hill have helped young Canadian artists to understand that there is no need to feel inferior about working or studying illustration in Canada."

Another Quebec illustrator, Andris Leimanis, has no doubts about the validity of his art. In Pointe Claire, Que., just outside Montreal, he works on an illustration for CN Rail, a dreamlike landscape that could hang in any Canadian gallery. A graduate of Loyola and Syracuse universities, Leimanis has been an illustrator for more than 20 years, a craft that in recent years has brought him such clients as Air Canada and the Royal Bank. And along with his art, he has perfected a philosophy about illustration. "I respect the art of illustration, and I love to try to create a work of art out of every illustration," he says. "It should be a painting ready to be framed after it has fulfilled its commercial purpose."

That understanding of illustration grew gradually as he worked for a variety of art studios in Toronto, Montreal and Brazil, until he went free-lance in 1976. "It's the classical

PETER CROYDON

Huntley Brown — touching viewers in their hearts and heads: (left) "The Old Edward Ward House," unpublished painting, 1980; "The Pleasures of Gardening," Star Weekly, *1969*



values of a painting that give the right mood, a quality that is so final to a real work of art."

At the Ontario College of Art in Toronto, Huntley Brown stands before a class of some of the brightest and best would-be illustrators in Canada. He's a burly, religious man with an appreciation of the spiritual. "Illustrations must go beyond transforming something from nature into a two-dimensional design," he says. "The illustration must reach inside people and touch them in their hearts and in their heads."

Philosophy finished with, the subject of his lesson is creating an effective and exciting illustration. He starts with a basic lesson on shapes, explaining that they have a life of their own. He demonstrates how a long, horizontal shape can evoke a peaceful feeling and how tension can be created by placing a vertical object in the illustration. Then he introduces other vertical objects and by shifting their position — some nearer, some farther — a whole series of different relationships can be established.

"It's important to remember," he says, "that the eye is always looking for contrast and excitement. You read a book because it involves you. It's the same with a good illustration; it may look very simple at first, but study it for a while and it begins to grow in its complexity and visual appeal."

Brown, who has illustrated for such magazines as *Maclean's*, *Saturday Night* and *Reader's Digest*, has taught both basic and advanced illustration at the art college periodically since 1959. "I try to provide my students with the methodology I have learned over the years. Had someone taught me when I was starting out, it would have saved me much grief."

He adds that for promising illustrators — "and there are many of them currently enrolled in art colleges in Canada" — the future is extremely bright, especially with the increase in specialty magazines.

Brown talks about the possibilities, about the skills involved in researching subjects, about clients who insist on tasteless approaches and about art directors who hand out impossible deadlines. And then he stops, reflects for a moment and says, "The only reason anyone would be an illustrator is because he loves it." □

THE WAY WE ARE

Coping with the changes in gasoline marketing

BY MARTIN JONES

ILLUSTRATIONS BY HUNTLEY BROWN

Quiz an aficionado of whatever persuasion, and you will quickly discover within the time-clock of his heart a special time never to be altered by argument or facts. What devoted baseball fan would ever describe the 1930s as other than the greatest days of the diamond? For those who love jazz there will never be any period to rival the twenties. And as for the North American motorist, the golden age will forever remain the 1950s.

And perhaps that is as it should be. The 1950s was a time of rapidly growing prosperity, surpassed only by expectations for the future. The automobile was at the heart of it all, and the automobile in turn permanently changed our lives. It made possible a new lifestyle, built around the suburb and the shopping plaza. Highways and expressways were thrown across the landscape to link city to city and suburb to downtown. And on every other street corner, or so it seemed, gasoline stations appeared. In fact, between 1945 and 1962 the number of service stations in Canada increased from about 24,000 to almost 37,000 — and most of that growth took place during the fifties. (Today there are as few stations as there were in that last war year.) The gas stations of the era were simple and predictable, all providing much the same service and facilities, with a couple of service bays and one or two pump islands. And every service station, at least in the blur of memory, was manned by a friendly neighborhood attendant who pumped gas, cleaned windshields, fixed the car and often knew his customers by name.

Times change, of course. The neighborhood station is just as likely these days to be a self-serve gas bar or to have disappeared entirely. And the motorist himself does not feel much loyalty for one brand of gasoline over another. He can not only select from a wide range of gasoline grades, but can choose whether he wishes to patronize a full-service brand dealer, a self-serve or an independent dealer selling gasoline at discount prices. And today when his car is in need of maintenance work, the neighborhood gas station is only one among many repair shops competing for his business. He is just as likely to take his car across town to a much larger service station, with many licensed mechanics, or a shop specializing in muffler or transmission work.

The stunning transformation that has occurred in the marketplace has not only been surprising to the motorist, it has at times been difficult and painful for the industries that service and fuel automobiles. Over the past 15 years the unpredictable has occurred with almost predictable regularity, and business has responded in ways that have changed the marketplace beyond recognition. Today the gasoline retailing and repair business is more diverse, efficient and competitive than ever before. And despite the occasional nostalgia for the neighborhood gasoline station of the 1950s, no one has benefited as much as the motorist.

As Norman Scott, a marketing analyst with Esso Petroleum Canada (a division of Imperial Oil), explains, the pattern of industry growth in the early post-war years reflected what the motorist wanted: reliable car maintenance from a dealer he knew, premium gasoline for his increasingly powerful car and, above all, convenience of service station location. "For the industry," Scott recalls, "conditions were such that to meet the growing market and serve the expanding suburbs, more and more stations had to be built. So the gasoline business, while retaining its structure, simply grew until stations were about as common to city corners as banking branches are today."

Early in the 1960s, however, gasoline marketers noticed some new and striking consumer trends at work. For one, a new market segment was developing — motorists who cared little for the service "extras" which the majority of consumers still valued. These new motorists wanted low prices and were prepared to go farther to get them. As a result, two new groups of gas retailers emerged in the late 1950s and early 1960s. One was the enterprising "independent dealer," who bought surplus gasoline directly from refiners, then resold it to motorists. By spending little on services for customers, the independent was able to keep prices below those offered by the well-known brand dealers. The other was the mass merchandiser, who already owned large retail outlets at Canada's growing numbers of shopping centres. Now, the mass retailer began opening gas bars and repair facilities to capture the large motorist market that had already made possible the emergence of the suburban shopping centre. And like the independent dealer, the mass merchandiser was able to undersell the major brand dealers.

All in all, the 1960s was a decade of intense competition. A number of innovative services were introduced as the oil majors fought to hold the market for those customers who still valued customer services and were willing to pay a bit extra for them. The major refiners, for example, successfully cross-linked car washes with service station operations. But for many motorists the decade may chiefly be remembered for its market-

ing flair. How can anyone who owned a car in the mid-sixties ever forget Imperial's advice to "Put a Tiger in Your Tank"? And today, when oil companies and consumer alike are preoccupied with conservation and costs, the memory of such gasoline giveaways as free dishware strikes a rather quaint note.

But the majors also recognized that they could no longer afford to cater just to that segment of the market that was willing to pay for the best in service. They also began wooing the growing number of cost-conscious motorists, who were being won away by the aggressive independents. Thus, later in the 1960s, some oil companies began introducing "second brand" gas stations that copied the independents both in appearance and in offering fewer services and lower gas prices. An even more important development, however, was that the oil majors realized that, because of changing consumer preferences, success in the future would lie in fewer

outlets with higher sales through each.

The majors had already begun reducing their dealer networks when the Arab oil embargo of 1973-74 turned international oil markets upside down and the latest chapter of the modern petroleum age began. From now on, price would be the most important factor in consumer preference. Trends that had begun in the 1960s accelerated. The majors stepped up programs to improve the efficiency of their service-station networks, reducing the total from about 32,000 in 1973 to less than 24,000 by 1980. At the same time, they accelerated campaigns to convert older, conventional stations to self-serve or build new self-serve gas bars which were strategically located. Because self-serves are able to sell large volumes of gasoline at low cost, they thus offer a lower-priced alternative to the motoring public.

Those recent years have seen several other innovations, which may not have been as visible as the movement to self-serve but which have been just as beneficial for the consumer.

Today the gasoline retailing business is more diverse, efficient and competitive than ever before

Imperial Oil, which led the way for many of these changes, was the first oil company, for example, to introduce fuel-efficient motor oil which increased mileage by an average of three percent. That same year, 1978, Imperial also introduced the first premium unleaded gasoline in Canada for motorists experiencing knock problems in their engines. And earlier this year the company embarked upon an ambitious pilot project to test a brand new concept in automotive repairs. At present "Auto Tech" comprises six spacious and ultra-modern facilities in the Hamilton-Burlington area of Ontario. Al Carter, strategic planning manager in the marketing department of Esso Petroleum, describes the new facilities as offering the most sophisticated electronic equipment available for analyzing automobiles. "Each building has about six service bays, each backed up by the best technology available. With that equipment the franchise owners and their employees — who are all highly trained — can pinpoint malfunctions in the car. That means they can keep costs down, because only those parts that really require it will be fixed or replaced. That's a precision that has never been possible before, because until now there had been no means of collecting or analyzing data to anywhere near that degree." The customer benefits in other ways. Each franchise is bound by a strict code of ethics, and each customer is given a comprehensive guarantee, good at any Auto Tech outlet.

As Carter points out, Auto Tech is so revolutionary and so ambitious a project that only a large and successful company like Imperial Oil could attempt such an undertaking. In that way, Auto Tech is an excellent example of how large companies can benefit consumers. But size also has its detractors, and the large oil companies, such as Imperial, have been accused at times of using their large size to curtail competition in the gasoline retailing market. There is little disputing the fact that gasoline retailing has been a "rough and tumble" business. Some independents have charged that the majors give special preference to their own branded dealers, in an attempt to hurt their independent competitors. A rather different and contradictory charge is that the extra price for gasoline charged by branded dealers represents a rip-off of the public. But as Norm Scott explains, much of the misunderstanding arises from the fact that major refiners distribute gasoline and diesel fuel on two price levels — at posted tankwagon prices to their branded associates and at a wholesale price to independent dealers.

"The posted price of gasoline to branded dealers," says Scott, "is on average a few cents more expensive than the wholesale price to independents, since it contains the built-in costs of such benefits as delivery to the station, advertising, credit cards and selling support — plus the good repute of the brand name. Because the independent dealer is buying gasoline only and receives none of these benefits, he can negotiate a price that is generally lower than the posted price for branded dealers."

These prices, however, can fluctuate. Imperial's branded dealers, like those of many of the majors, operate on a three- to five-year contract. Agreements between refiners and the independents are much shorter, usually one year, and even then the price may be changed on reasonable notice, according to the supply of gasoline available. Therefore, the independents are subject to greater price fluctuation. Over time, though, the price difference is about equal to the differences in costs involved in supplying the two different groups.

Another frequent criticism leveled at the majors concerns the practice of "consignment selling." Like other oil companies, Imperial uses consignment selling to protect its branded dealers during times of intense competition, when competitors cut prices below the level at which branded dealers can afford to operate. At a dealer's request, Imperial will buy back his gasoline inventory, set the retail price and pay him a commission for selling gasoline to the public. As Norm Scott points out, "If branded dealers did not have this protection against price slashing, large independent dealers could move into their territory and cut prices, knowing that the branded dealers would be unable to respond."

There is no doubt that the years since the oil embargo of 1973-74 have been difficult for some independents. The 1960s were years of rapid growth. Independents managed to increase their share of the gasoline market to about 20 percent. During the past eight years, however, the independents as a group have only managed to maintain that market share. Some indeed have gone out of business. But several — the most innovative, efficient and aggressive — have enjoyed remarkable success. Ken Hubley, account manager for supply sales with Esso Petroleum, works directly with the independents. He points out that by and large independent dealers who have had trouble adapting to the market of the 1970s were those who failed to improve the efficiency of their operations. "Many of these people came into the market when offshore gasoline and fuel oil were cheap," explains Hubley. "Some of them unfortunately were not highly efficient, were poorly located and failed to develop firm relations with one or two long-term suppliers. Instead, they constantly

switched suppliers to buy at the lowest price and were the first to suffer when supplies of crude oil became tight."

Ken McCrimmon, general manager of Top Valu Gasmarts, one of Canada's most successful independent chains, would agree with most of those sentiments. Top Valu has been in the gas retailing business for 20 years and now operates 110 stations in Ontario and Quebec. McCrimmon

credits Top Valu's success to a number of factors, including the company's good working relationship with its suppliers. "Over the years," he says, "we have dealt primarily with three suppliers, including Imperial Oil, rather than constantly changing suppliers, as do some independents in order to get the best price on the market. In time you develop a good relationship, in which you can present your problems to your supplier and he'll do his best to provide assistance. In the same way, an independent has to be sympathetic to the problems of his supplier and recognize that he's in the business to make a profit as well."

Other factors behind Top Valu's success, according to McCrimmon, have been good management, innovative marketing techniques and the kind of efficiency that enables the company to maintain a profitable price structure.

Jack Robillard, president of Suny's International Inc., another successful and growing independent based in Ontario, echoes many of the same sentiments. Since its formation four years ago, Suny's volume of business has grown much faster than the rate of overall market growth, a fact that Robillard credits to such decisions as proper site location. "A decision was made early in the corporation's existence to locate its outlets whenever possible in shopping plazas. As a result, the company now operates a relatively small number of outlets in high-volume locations." In fact, that approach extends right to the installation of the gas pumps. Says Robillard: "The company developed an innovative system of strategically locating pumps around a central kiosk, which permitted a dealer to service considerably more automobiles than would be possible with a conventionally laid out gas bar." Cost control has been another important factor in Suny's growth, according to Robillard. Capital investment has been kept to a minimum by staying away from service bays and ancillary services which require a great deal of capital and manpower. Head office expenses are also kept to an absolute minimum by maintaining a skeleton staff in inexpensive office quarters.

Despite Suny's excellent growth record, the recent report of the Director of Investigation and Research of the Combines Investigation Act alleged that Imperial Oil manipulates Suny's pricing policy to the detriment of competition. According to Robillard, the allegation is exactly opposite to the reality of the situation. "The relationship between Suny's and Imperial Oil permits Suny's to be very competitive in its pricing," he explains. "Suny's is in business to maximize volume and profit. Its innovative methods of operation permit it to be very competitive in the marketplace and still make a profit."

Both McCrimmon and Robillard are optimistic about the prospects for the independents. Suny's sees a big advantage in its strategic, high-volume locations which should ensure the company's prospects whatever competitive storms may descend. The present layout of its stations also permits easy and economical conversion to self-serve. For Top Valu one of the keys to future prosperity will lie in further modernization of its facilities and more sophisticated management systems, and indeed the company is constantly looking at methods for improving its efficiency and cost control.

Those last two concepts — efficiency and cost control — might well form the watchwords for the gasoline retailing industry in the future. There is little doubt that as oil prices continue to rise in Canada, the emphasis for the retailer and motorist alike will be price. And as Charles Hayles, vice-president and general manager of marketing with Esso Petroleum, suggests, we should see a continued shift toward discount gas and self-serve, as well as a further consolidation of service-station networks, with the least productive stations being eliminated. Other factors that should try the ingenuity of gasoline marketers will be a continued decline in demand for gasoline, coupled with a growing interest in diesel — which is 15 percent more efficient than gasoline — and other alternative fuels.

Imperial is preparing for that competitive marketplace of the future. The company, for example, is presently expanding its diesel fuel outlets for passenger cars and plans to begin advertising diesel fuel service later this year. It is also experimenting with using propane as car fuel.

All in all, there should be a host of new services, products and surprises at "the pumps" in the future, as companies, large and small, jockey for position in one of the most exciting and competitive of industries. But then for an industry in which the unpredictable has become a way of life, that's really no surprise at all. □


TAL GAYLE
FAVORITES
KARATE
Talking Books
K. Norel
VLIEGERS IN HET VUUR
Voorwaarts!
THE SCARECROW OF OZ
COSTRUIRE CON IL LEGNO
I NUOVI MANUALI
RIZZOLI
STAR TREK

NOT FOR READERS ONLY

Variety is the spice of libraries

BY DOUG FETHERLING

What's going on these days in the Northern District branch of the Toronto Public Library would no doubt shock people who haven't been in their local library for 10 years or more. Even to neighborhood residents who are slightly more frequent in their visits, the changes come as something of a surprise. The building itself is the same as it's always been — on the outside. But gone from the inside is that heavy, lugubrious air of intimidation that libraries — all libraries — used to exude. Gone, too, is the old-fashioned notion that libraries should serve but one function: the simple lending out of books.

The people in charge of the Northern District Library, like those running an ever increasing number of such institutions all across the country, are making a two-fold attempt to render the places less aloof, more practical to more people and just generally better integrated with their communities. Part of the progress involves diversifying into other areas besides books, but part is also tailoring the sort of volumes one has to the needs of the people in the neighborhood.

For instance, the public library of St. Leonard, an independent municipality within Montreal, and the Dufferin-St. Clair arm of the Toronto Public Library are both located in areas with immense Italian populations. Accordingly, both have made a point of acquiring all manner of works in the Italian language, much to the benefit of their public image and public usefulness. The Northern District, by comparison, is the library of an area that's home to a disproportionately large number of people over 65. "Therefore," says Trudie Town, an administrator for the Toronto Public Library System, "we've very successfully started a number of programs for seniors." The response has been such that the library has literally had to turn people away. And turning people away is the last thing librarians across Canada wish to do these days, for a complex series of reasons.

"What it comes down to," says Anne Woodsworth, the director of libraries at York University in Toronto and a veteran of the public library system, "is that libraries have had to become community-oriented and politically aware in order to survive." The citizens' movement that began in the 1960s, she says, turned attention on what were formerly places run by a sometimes small elite for the benefit of a somewhat larger elite, the traditional book-borrowing public. Budget squeezes that began in the 1970s only underscored the lesson. "Librarians now must cater to what the public wants," she says. "That's the big change. Every library-science graduate used to come out of university with a sense of what was right and good for people; now they're taught to go out and find out what people want." It's a big difference, and it's transformed the very role the library, whatever its size, performs in the community.

In its barest outline, there's nothing new about the principle. Almost every public library in the country is likely to have been collecting filmstrips, records and special literary material (such as children's books or works in braille) for quite a few years now. In the larger cities of the East, in fact, this tradition, and the custom of letting out library space for purposes not strictly literary, go back much further than most people realize.

A predecessor of the present Toronto libraries, for instance, had a music hall and a large lecture room as early as 1853; and the Toronto Public Library System as presently constituted has had strong collections of French- and German-language books since 1885; braille came 10 years later, followed by phonograph records in 1915 and films in 1947. But such activities were always mere appendages, little frills. The difference is that today the frills

are coming to seem more and more important, the very fibre of what keeps libraries relevant. What's more, the whole philosophic underpinning of the library has been altered so that the library users help decide what the library shelves should contain and what other purposes the structure should be used for.

At Toronto's Northern District Library, for instance, a special department supervises the rental of library space to various outside organizations, both commercial and nonprofit. The former category includes a rapid-printing service, which the library patrons indicated would be useful and which it was thought would help in making the building more of a community clearinghouse — the kind of informal meeting place we associate with the parish pump or the general store of the 19th century. Among the noncommercial tenants are various social-work organizations, including the Advocacy Resource Centre for the Handicapped. And book-borrowers and nonborrowers alike can nip in for a bite at the Café Bibliothèque, another of the outside services.

But though the Northern District Library is a good example of this process of library democratization, it's by no means the only one — or the only obvious one. Indeed, the whole point is that each library should remake and extend itself along lines suggested by the needs of its particular community and no other. Partly this involves eschewing conventional wisdom. The public libraries of Halifax, for instance, are only now starting to acquire many braille volumes and "talking books," says John Murchie, who's library director of the Nova Scotia College of Art and Design and a keen observer of library practices in the Atlantic region; the reason is that more visually handicapped people have been concentrated in the city because of the recent expansion of federal and provincial institutions in the area. Libraries also respond to the community by what they don't have; the Yellowknife Public Library, perhaps alone among major public libraries in Canada, has never had a film projector or even a slide projector. It's not just a case of having no room for them, according to Jeannette Fish, the librarian in charge; it's lack of demand. Yet the most obvious way to illustrate the process of library specialization and custom tailoring isn't by listing what a few *refrain* from doing but by showing what many of them do more or less uniquely.

The library headquarters in Truro, N.S., for instance, seems from the outside a typical progressive library. The new building, erected in 1968, is in the heart of the downtown business district. It has three branches and two bookmobiles, and the staff has always tried to make the public aware of the library's traditional role through interviews on local radio and contributing book reviews to the local newspapers. "But when I went through the old annual reports," says Bonnie Waddell, the adult services librarian, "I saw that the adult programming had been very traditional — just book talks and the like." So now the library gets involved in joint ventures with local organizations, such as the art society, and hosts legal seminars for the layman in such areas as how to cope with family violence and how to make wills. The children's programs are even more imaginative — reading tutorials, visiting authors, puppet theatre.

The library as community centre has become part of official policy in Montreal. In recent years the city's 22 branches have offered programs on subjects varying from individual and consumer rights to hunting and fishing. That philosophy was extended last September, when the executive committee of the City of Montreal announced a budget of $20 million over three years to convert local libraries into cultural centres. As well as the traditional services, the revamped libraries will offer concerts, plays and film showings, as well as refresher courses in languages and the arts. Perhaps the most imaginative idea in the program is a plan to open a branch in the McGill subway station, an experiment that both the library and the city administration believe is unique in the world.

Another splendid example is Regina, where during the past 10 years there has been "a real effort to get beyond the hard-core readership," according to Ken Jensen, the assistant chief librarian. One of the first things to be implemented was a program to help adults overcome perceptual handicaps and the like. But now community colleges have taken over that function and the library has moved on to other areas, many of which it would seem to have a permanent corner on.

In a city not blessed with repertory or art cinemas as Vancouver, Montreal and Toronto are, Regina's library is the alternative. It operates a theatre, catering to local film buffs, as well as a noon-hour series of films for business people. In fact, Regina has a collection of films second only to Toronto's, and last year attracted an astounding 800,000 viewers. The library also offers such activities as, to take a few at random, a workshop on how to prepare your income tax return, a course in sewing-machine repair, and a children's class in the making of video tapes. Regina's most innovative program involves a writer-in-residence, something usually associated with the university campus. Each year some distinguished professional writer keeps office hours at the library, helping aspiring local writers of every level and description. One recent writer-in-residence was Eli Mandel, the Governor-General's Award-winning poet, a native of Estevan, Sask.

Of course, this new direction in librarianship — this rethinking of the

very concept of libraries — has not been without controversy. "It's sad," Jim Lotz, a Halifax writer, wrote recently, "to see libraries playing the hype and hoopla game and rationalizing it as 'community involvement' and 'public participation.'" His comment represents a sizable body of opinion that holds that librarians are trying to ingratiate themselves with their communities simply to save their budgets or to achieve some vague political ends, and it's hard to deny there may be some truth in that.

"The library has had to compete with sports facilities such as arenas when it comes to public moneys," admits Diane Mittermeyer, a lecturer in the Graduate School of Library Science at McGill University in Montreal. So it only stands to reason that libraries must prove that they're providing more services to more and more people. And the only way to do that is to expand on what has always been the traditional role — which in turn takes more money to do, in a big, vicious circle. Yet in another light, such criticism seems based on a misunderstanding of the phenomenon. Public libraries are, after all, *public*, as the name implies. What they're doing is not casting their nets as wide as possible but trying instead to tailor what they do to their own venues — to their own particular public — instead of operating on the basis that the needs of one city or neighborhood are also the needs of the next.

This idea that libraries should be, above all, flexible finds its best spokesman in John Marshall, who teaches courses on the library's relation to the community at the University of Toronto and is working on a book on the subject. The essence of the courses, he says, is to "look at community problems libraries have identified — everything from the interests of small business to those of ethnic groups or senior citizens. For I have discovered that what's needed as much as community-action programs is knowledge about the community the programs serve."

As an example, he cites the case of a small Toronto library branch whose staff noticed a large concentration of businesses run by Southeast Asians. Were these people who ran stores in the area but who lived elsewhere? Or was there an equally significant residential population of similar origin whom the library might be serving? Spadework revealed that no, there was not. No funds wasted or asked for there; the library simply went on to spot other potential needs — including those of shoppers and shopkeepers.

Marshall gives another instance, as well. When the first great wave of Italian immigration began reaching Toronto in the early 1950s, one particular branch acquired many Italian-language editions of the classics and such. Not until 1975 did it begin actively seeking the advice of the Italians in the neighborhood. It realized that what the patrons really wanted was popular Italian novels. Once the leisure reading was added, the results were noticeable at once. "When this principle was applied throughout the Toronto system, the use of the materials more than doubled," Marshall says, "and that was unprecedented in library history." For some years the total circulation of all books in the public libraries of Toronto had been dwindling, as it had been in other centres as well. But since the mid-1970s the circulation trend has been reversed. And this is no doubt due in large part to the use of what, in other sectors, is called market research.

Like most advances, of course, this one opens up whole new problem spots no one had ever given much thought to before. By and large, tailoring library services to the proven community requires more money than just sitting back, collecting books and letting the people come to you; but some of the areas with recognizable problems don't receive sufficient funds. The Northwest Territories, for instance, has the highest illiteracy rate in the country, according to Jeannette Fish in Yellowknife. "But we're doing nothing in this public library for the less literate, because the funds are so low."

Another problem, according to Fish, is that adults in the native community tend not to use the library much, simply because it's not part of their cultural heritage — over and above the shortage of materials in the Indian languages. Her library tries to help compensate with some innovative ideas — the fact that it has no fines on overdue books and that it's set up an informal paperback exchange rack where anybody can trade in his own books for others he hasn't read. But all this only emphasizes what John Marshall sees as the basic problem Canada-wide, "the problem of finding ways of reaching working people, immigrants and those who are less advantaged generally."

That is really the heart of the matter in terms of what librarians are doing these days. At base, there's nothing very original in various schemes for luring new customers into library buildings. "But the old emphasis on programming as a bait to get people inside — we no longer believe in that," says Ken Jensen in Regina. "The program is an end in itself." The aim is to find out what the people in one particular little area want and need and then to provide it as best you can in the hope of making the library and the user more necessary to each other.

"We have to let go of the idea that the librarian is morally and culturally superior," says John Marshall, thinking aloud about his forthcoming book. "But on the other hand, it's clearly a mistake to go only for the most popular cultural materials, such as comic books, simply because that's the level some potential patrons are at. It's a tricky problem, as you see. And there's no easy answer." Slowly but surely, however, a new generation of librarians is groping toward a workable compromise solution. In a very quiet way befitting the country's quiet reading rooms, it's something like a revolution. □

An energy education

Planting the seeds of energy wisdom

BY TED FERGUSON

PHOTOGRAPHS BY BARRY DURSLEY

The premier of Alberta was adamant. His province had endured so many economic setbacks in past decades, he said, that it deserved to reap the full benefits of the current energy boom. As was to be expected, the prime minister did not agree. Rising to his feet, he told the delegates that Ottawa needed a greater share of oil and gas revenues in order to enrich the entire nation.

The exchange between the two leaders had all the earmarks of a heated conflict at a federal-provincial conference — except that both the prime minister and the premier were teenagers. The debate was part of an innovative project staged in a Calgary classroom earlier this year. Entitled the Oil-Pricing Game, the project involved having nine Grade 10 students assume the roles of political policy makers engaged in a head-on confrontation. "We had some very lively sessions," says social studies teacher John Graham. "The kids not only had fun playing the roles, but the whole class learned about energy issues in an exciting, dramatic way."

Graham created and staged the game with more than just his St. Francis High School class in mind. It has become his contribution to the far-reaching programs developed by an Edmonton-based foundation that is striving to help young people gain a better understanding of energy and environmental concerns. Launched five years ago, SEEDS (Society, Environment and Energy Development Studies) provides comprehensive classroom materials for elementary, junior and senior high schools.

"Our main goal is to provide objective information for tomorrow's citizens," says SEEDS executive director Robert Westbury. "The educational philosopher Norbert Weiner has said, 'To live effectively is to live with adequate information.' The aim of the foundation is to ensure that young Canadians have the knowledge to make wise personal and social decisions about energy and the environment."

Westbury and his two co-workers, program director Hugh Phillips and executive assistant Lynn Bushey, have a heavy workload. In addition to coordinating the preparation of the classroom material, they also develop teaching aids such as posters, bibliographies and field-trip guides, as well as arrange teacher workshops and conferences across Canada. All on a $255,000 annual operating budget derived from public institutions and 135 private companies, including Esso Resources, a subsidiary of Imperial Oil.

Most of the private companies are in the energy field, but SEEDS takes great care to ensure that the material it presents is unbiased and shows the many sides of every issue. The material is, in fact, the result of an exhaustive, four-year research and writing task carried out by members of the teaching profession. Under SEEDS guidance, 60 western-Canadian teachers, working in teams of five, interviewed acknowledged authorities in private industry and government as well as university professors and environmental-group spokesmen.

By January 1979 the teams had completed the development of the materials, and the foundation was ready to embark on the pilot testing phase. To make sure the testing was effective, SEEDS set special guidelines. "We felt that in order to get the best program, we should involve as many people as possible in a thorough evaluation," explains Westbury. Before beginning the program, pilot teachers met with the writers to examine the materials and discuss how they should be used in the classroom. Then, during the 1978-79 school year, 133 teachers used the program with approximately 5,000 students. Once they had completed the program, the teachers were encouraged not only to report on their experiences, but to send in their suggestions for improvements.

Evaluating the whole process was an independent team of educational experts from the University of Lethbridge, headed by Dr. Eric Mokosch. According to its report, the teachers and students were enthusiastic about the SEEDS program, but there was still room for improvement. Industry, environment and education experts also suggested changes. Four teams of teachers combined these suggestions, plus the

teachers' comments, into a revised manuscript.

This careful attention to details has led to a wide acceptance of the SEEDS materials. Teachers across Canada are now using them in their classrooms. Major sales have been made in the United States, and the international firm that handles SEEDS, Science Research Associates (SRA), also plans to market the program in Britain and Australia. "It is quite conceivable," says Westbury, "that SEEDS could become the most successful independent curriculum project ever developed in Canada."

"The Americans have told us that we have the best course of this kind on the continent," says Westbury. "After all the years we've put into it, that was extremely gratifying to hear." Westbury has been with SEEDS since its inception. A native of Sydney, N.S., he has a full slate of academic credentials, including a Master of Curriculum from the University of Oregon and a PhD from Florida State. He taught in Alberta for 20 years and was director of curriculum for the Edmonton Separate School Board before he was chosen to head SEEDS.

The biggest problem confronting SEEDS in its formative stage was avoiding the stigma that it was a propaganda outlet for energy corporations. The foundation was, after all, originally proposed by a utility-company president, Marshall Williams of Calgary Power, whose staff received so many requests for data from teachers that he realized a full-scale educational program was sorely needed.

"There is a great deal of interest in energy and environmental matters, but in many cases there is a real deficiency of useful materials in school systems," says Brian Hay, formerly Esso Resources' senior public affairs adviser in Calgary and now at Imperial's head office in Toronto. "Because it recognized the need for improved materials, our company was among the first to join the foundation."

To date, Esso Resources has spent $120,000 on SEEDS projects, and Hay is currently on the board of directors, a nine-member volunteer group

Students discover the power in a peanut (above) and cooking with the sun (left)

An energy-wise architect explains his plans for a solar home

Yesterday's news becomes today's recycled paper

consisting of three representatives from education, three from industry and three from economic, labor and social-science fields. Besides having a balanced board of directors, Westbury has successfully reduced suspicion that private industry is calling the shots by bringing teachers and environmentalists into the planning process. He has also initiated a series of regional and local workshops where opposing views can be and are presented.

National workshops, sponsored by Shell Canada Resources Limited, have also been held at the University of Calgary, one in 1980 and another in 1981. Each year 27 teachers traveled from every province to take part in the four-week program. The topics ranged from nuclear power plants and biomass energy to coal mining and wind generators, with over 60 speakers from across Canada involved in the presentations.

"We've tried to develop a spirit of trust and openness at the workshops," says SEEDS program director Hugh Phillips. "As a result, our sessions can be lively and spirited, and many different viewpoints emerge. Our purpose is to expose people to fresh ideas and concepts in the areas of energy and environment. Our hope is that through sharing ideas and views people will work together toward a solution of the energy and environmental problems Canada faces." Brian Hay adds: "Most people think energy developments and good environmental practices conflict. In reality they go hand in hand — for example, using waste gases for fuel rather than releasing them into the atmosphere."

The teachers who attended the workshops were also taken on field trips to Imperial Oil's Strathcona refinery near Edmonton, Atomic Energy of Canada's Whiteshell nuclear research station at Pinawa, Man., and the Kananaskis solar and wind research station west of Calgary. Westbury believes field trips are a vital learning tool, and he encourages teachers to take students to energy-resource sites whenever possible. "Most people have trouble understanding a technical field that's outside their sphere of experience. A visit to an oil refinery or a solar power station can create an immediate and broader comprehension of the enormous problems involved in dealing with our shrinking energy sources."

But as Westbury explains, there are many sides to the energy and environment question. "Part of the problem lies in the fact that we tend to divorce what we do from the issues. In brief, we have the 'other person' syndrome; someone else is always the bad guy."

"However, if we are to solve our problems," Westbury continues, "it can only be through an understanding of our personal responsibility. In the words of Buckminster Fuller, 'There are no passengers on spaceship earth, only crew members.'"

The materials for Grades 1 through 6 are geared to fit regular science, social studies and language arts courses and can be taught in four- to six-week periods. For Grades 7 through 12, SEEDS provides separate four- to six-week units for both science and social studies.

Role-playing is employed throughout the materials. Grade 1 youngsters perform charades to learn how people use energy and how it is essential to the life cycles of plants and animals. A Simon Says session has children walking, jogging or jumping and a teacher relating their movements to home appliances by determining which movements require a lot of effort and which don't. Filmstrips, poetry and hands-on experiments are also used. By Grade 6, students are familiar with renewable and nonrenewable forms of energy, their sources, their uses and their environmental impacts. In Grade 7 the focus is on electricity and its production from renewable and nonrenewable sources. Students examine nonrenewable energy supplies in Grade 8 and grapple with the economic and socio-political issues associated with the development of renewable resources in Grade 9.

By the senior high school level — Grades 10, 11 and 12 — students are ready to delve into the technical aspects and complex social and environmental interrelationships of

energy resources and conversion processes and uses. They also examine the related social, economic and political factors involved in major national and international issues — and this is where the Oil-Pricing Game comes in.

Using SEEDS material, a social studies class probes the pricing issues for two weeks. Then, simulating a federal-provincial confrontation, nine students are chosen to face each other across a table, some putting forward the point of view of the oil- and gas-consuming provinces, others taking the case for producing provinces.

One student represents the Maritime provinces, another the prime minister, and the teacher serves as a moderator. "The students sometimes become so enthusiastic that they do a tremendous amount of research on their own," says game originator John Graham. "The only complaint I've had was from a parent saying his son was having so much fun looking up facts that he was neglecting his other chores at home."

Graham and the Calgary teacher who helped him write the SEEDS material, Doug Ramsay, both feel the game has more impact than textbook lessons would have because when they are mentally stimulated by the role-playing session, the students tend to remember the facts better.

To supplement the classroom material, the foundation has prepared field-trip guides for each of the 10 provinces, a series of 16 posters with guides illustrating key topics and a Canadian energy and environment bibliography listing all useful materials available for students and teachers. "There are an estimated six million students in Canada," Westbury says. "They deserve the best information available to help them come to grips with the social, economic and environmental problems our country faces."

The SEEDS materials are about many things — leather for shoes, wind for ships, oil for sealing wax. But most of all, the SEEDS Foundation reflects a concern for spaceship earth and the belief that education will help young Canadians steer it through the tough years ahead. □

SEEDS

Indoor and outdoor experiments give students the knowledge to make wise decisions about energy and the environment

In Closing

It is Friday in Rome and I have been here a week. It is very early in the evening, a time when the air, which is hot and close all day in Rome during summer, begins to stir slightly, so that by dusk the sidewalks will be refreshed and filled with sounds — echoes of arguing, echoes of laughing, echoes of history being remembered. For now, though, the street alongside my old hotel, Via Due Macheli, is still and hot, and I am walking with my wife, slowly and aimlessly for I have time to put in, stopping to look into the windows of stores on our street and others in the neighborhood, which is just up from the Piazza di Spagna and the Spanish Steps, the extravagant stairway of 136 steps.

We are not in a hurry, for we are on our way to dinner, and in Rome dinner will not be early. It is as if the Romans, who close up shop and take a nap through the heat of the afternoon, are waiting to make sure that everyone is up and about once more before they spread the tables at the Café Greco, where they say Keats ate, or at the Palazzi on the Mone Mario or at the restaurant I like best of all, the Ranieri, which is on Via Mario de Fiori and which, according to the stories told of it, is the oldest continuing restaurant in all of Rome — a place where cardinals have dined and where, for well over a century, the floors have been worn smooth by waiters carrying trays to those seeking a quiet corner of history when they dine in one of the world's old and great cities. We dined there on Monday evening, and so tonight — when we are taking a friend who lives in Rome to dinner — it is natural to seek out a familiar place and to ask for a familiar table.

Our friend is waiting when we get there, standing on the sidewalk outside the modest, curtained doorway you can miss if you aren't careful. He is a man of medium height, with a thoughtful, scholarly manner — which is natural, for he is a scholar, the Reverend Robert Robidoux, who grew up in Verdun, Que., studied at the University of Montreal and later in Rome at the Angelicum, first in the fifties when he took moral theology and later in the sixties when he took liturgy. He is a doctor of theology and has been, at various times, a lecturer in ethics at the University of Winnipeg (to Catholic and Protestant students) and secretary to the apostolic nuncio in Ottawa, which is the embassy of the Holy See in Canada. Since 1978 he has been living in Rome for the third time and has been serving as Rector of the Canadian Pontifical College — which was founded in 1888 by the Sulpician Order and where Canadian priests reside while taking theology in Rome. He has been a great help to us during our summer visit to Rome and the Vatican to research an article for a Canadian magazine, *The United Church Observer*, with which we've had a long and cordial relationship.

It has been, in many ways, a spring and summer of ferment and anxiety in all of Italy — a national referendum on several contentious issues, followed by a political scandal (the P2 Affair) which shook the country and, rightly or wrongly, brought down a government. But neither of these was as overwhelming to Italians, even those who regard themselves as entirely secular, as the event that

preceded both occurrences on May 13, when an assassin made an attempt on the life of Pope John Paul II, thus carrying the crazed idea of violence against public figures to its ultimate incredulity. The incident, which was a preoccupation of the press and people for many weeks after, could, as Father Robidoux mentioned when we first met him, have the effect of restricting the papacy of the present Pope and could persuade future popes to act likewise — a fact that would be unfortunate for all of us, including Canadians, since it is hoped the Pope will soon, upon full recovery, visit Canada.

"I do not think Pope John Paul II," Father Robidoux tells us, "will change his approach and become more insulated from people. He is, above all, a great pastor; I think, in fact, that this may be the great characteristic of his papacy. And of course, as everyone acknowledges, he has a great gift for this, not just because of his personality, but because of his talent for languages; he is fluent in several, able to speak a bit of several more — about a dozen in all. Before he went to Japan last year, he was celebrating mass in his chapel with Japanese-speaking people so that he could learn, if not the language, then many of its basic words."

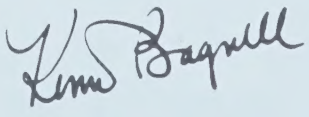
The Ranieri restaurant, which has been in one family almost since it was founded in 1843, was a favored dining room of one of the Pope's predecessors, Paul VI, when he was Monsignor Giovanni Battista Montini. He was elected Pope in 1963, and while he had a reign that was sometimes difficult — following the much revered John XXIII and reaffirming the Church's opposition to artificial birth control — he and John Paul II are sometimes seen to have certain conservative attitudes in common. Is John Paul II a conservative?

Father Robidoux does not reply quickly, and when he does he is very precise in what he says. "I think it is natural for people to seek to categorize the various popes — this one liberal, that one conservative and so on. But of course, they do not fit into these categories that easily. After all, what is liberal in one time and place may be seen by some to be conservative later on. The question of conservatism and John Paul II seems to come up because he has reminded priests in some parts of the world that while the Church may offer guidance, counsel, suggestions, it should not seek to be the government. And it certainly should not forget, after all, that its commission is to foster communication with God. I think that is what John Paul II has been saying to the Church and to the world, that we must be sensitive to our priorities. And I doubt if doing that can be categorized as conservative or liberal."

The same week in which we arrived in Rome and met Father Robidoux, the Pope returned to hospital for corrective surgery. In the newspapers and on television, attention focused for days not on his politics but on his person — he is referred to by many Italians as 'Papa Wojtyla' — as if there was a need on the part of people to remind themselves that behind the august position was a man who was hurt and in danger.

"Last spring, on the first of May," Father Robidoux recalls, "he sent an invitation to the priests from Canada who were at the Canadian College to come to his chapel to celebrate mass with him. There were about a dozen. You can imagine, I am sure, that it was a memorable occasion. After mass he met everyone individually and spent time asking about the college and the country. I had met him once before — at a meeting of the various rectors of the ecclesiastical colleges in Rome — and was struck then by his gift with people. He is a great listener."

Late that evening, after we say good-bye to Father Robidoux, we begin walking slowly back toward our hotel. The sky of the city seems the color of sapphire. We pass once more through the Piazza di Spagna which by now, near midnight, is filled with young people, talking, singing, crowding the stairway to the very top. In some ways they seem far away from the life of John Paul II, who by now is back in hospital in another part of the city. Perhaps some of them think of him. But it is natural for some of us to believe that whether they do or not, he is the sort of man who will think of them, no matter if they are of his faith, another faith or no faith at all.



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